



Department of Agriculture

Enabling Communities, Expanding Opportunities



2013 Annual Report



The Cover

Thank you to the Philippine Rural Development Project (PRDP) for its tag line *Enabling Communities, Expanding Opportunities*. The inspiration for the design of the cover is the PRDP logo.

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Message from the Secretary

Agriculture Secretary Proceso J. Alcala (center) joins farmer-members of Hildang-Hilongos-Hinunangan Federation of Irrigators' Associations, during their harvest festival and farmers' and fisherfolks' forum, on October 25, 2013, in Hilongos, Leyte. DA awarded P10-million worth of agricultural projects, farm machinery and equipment, farm inputs, planting materials, and breeder goats to boost the province's agricultural productivity and farmers' incomes. Leyte Governor Dominico Petilla and Representative Carlos Cari also attended the event.



Giving Farmers and Fishers a Face

MARAMING mukha ang makabagong agrikultura.

Combine harvesters that allow farmers to harvest their palay before a forecast typhoon hits. Tramlines transporting produce across mountain areas. Concrete farm-to-market roads that will not disappear after the next flood.

Farmers receiving production loans through their individual bank ATM cards. Crop insurance paid to claimants within 20 days from filing of damage report. Coconut twiners covered with social security benefits when they make their weekly quota.

Agro-meteorological stations monitoring micro climate to guide planting cycle. Farmers deciding on the variety of rice to plant and kind of fertilizer to buy. Community seed banks that make quality seeds available in remote areas.

Service provider groups run by landless rural workers who offer land preparation and harvesting

services. Irrigators' associations engaged as food security partners.

Municipal fisher's banca registered in the national registry. Productive fishing areas protected through successful closed season during spawning time.

Ngunit pinakamahalaga ang mukha ng makabagong magsasaka at mangangisda.

For the Department of Agriculture, agricultural modernization is not only about promoting technology and increasing production but giving the farmers and fishers a face.

We look at farmers and fishers not just as factors of production, but distinct persons in their own right. This is why as producers they must be empowered to transact with other stakeholders in the sector — with processors, with input suppliers, with exporters, with government agencies, with banks and other financial institutions, with farmers' associations and other



civil society organizations.

And we must insure that farmers and fishers make tangible gains as they strive to make a living. We want them take pride in their role as food providers and appreciate it as an essential contribution to nation-building.

In the first two years of my term I went to all the provinces and met with farmers and fishers. While putting them at the center of development has been the staple of agri-fishery rhetoric for years, I discovered that for most of the farmers and fishers I shook hands with and listened to it was their first time to meet with an agriculture secretary.

Thus, we at the DA strengthened our resolve to go beyond rhetoric to action and we are happy that in the administration of President Benigno S. Aquino III the agriculture budget was increased from Php 38.6 billion in 2011 to Php 75.0 billion in 2013.

Kagawaran ng pagsasaka. Kagawaran ng magsasaka at mangingisda.

This report presents what the DA has delivered in 2013: infrastructure, farm mechanization and

post-harvest facilities, research and extension, market development, and policy and regulation.

The outputs delivered and resulting impacts include 128,242 hectares of newly irrigated lands, 2,361 kilometers of constructed farm-to-market roads, 14,045 units of farm machineries and post-harvest facilities for rice production, regeneration of fishing areas, the widespread fertilization and replanting of coconuts, the opening and rehabilitation of coffee, cacao, and rubber plantations, 54 percent improvement in agri-based exports in 2013 over 2010, 9.3 percent improvement in farm gate prices and the attainment of 96 percent rice sufficiency for the country from 81 percent in 2010.

For 2014, DA has prepared the launch of the Philippine Rural Development Project (PRDP), its platform for agri-fishery modernization. This six-year (2014-2020) program builds on the gains of the Mindanao Rural Development Program (MRDP) that impacted 226 towns and cities in all 26 provinces and all six regions of Mindanao. Thus, PRDP will not start from scratch. It carries over the successful techniques and methodologies tested in the MRDP like the use of geotagging as a monitoring tool for projects from initiation to completion and the lessons from the harmonization of operations manuals for infrastructure and joint enterprise projects.

A full 92 percent of this Php 27-billion program will deliver goods to the ground. The remaining 8 percent goes to improving the DA's planning processes and upgrading its finance, procurement and administration procedures.

PRDP will be implemented throughout the country. It will lay agri-fishery infrastructure that support value-adding activities that enable farmers and fishers to participate in growing the economy and share in the gains of development.

As we enter the second half of this administration's stewardship, we reaffirm our vision of making the engagement of farmers and fishers in a modernizing agri-fishery sector result in improved incomes for their households. We have prepared the ground and sowed the seeds in the first half through various programs demonstrating "bago at makabagong pagsasaka." In the next two years, we will nurture the field and ensure that we realize this vision to the fullest possible level.

Thus our battle cry for our remaining years of service at the DA: *Pagyamanin ang pamayanan, payamanin ang mamamayan!*

PROCESO J. ALCALA
Secretary

What All These Mean to Juan

Mid-term Report, Desired Scenario by Final Term

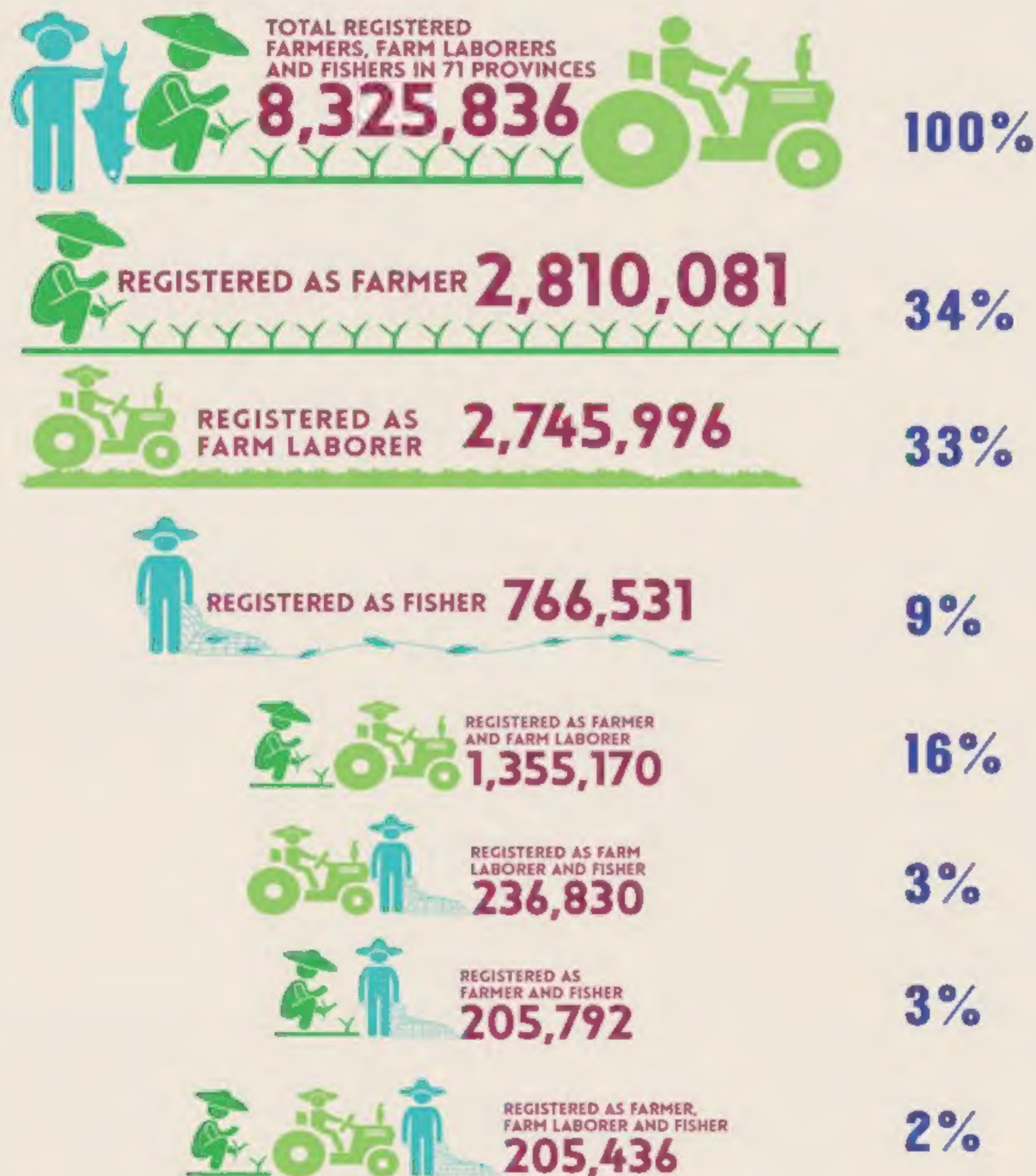
	Mid-Term Report: What We Delivered July 2010 - June 2014	Final Term Scenario: What We Commit to Deliver July 2014 - June 2016
Poverty Reduction	<ul style="list-style-type: none"> » Highest decrease in poverty incidence for the period 2009-12 for fisheries sector (a reduction of 2.1 percentage points from 41.3% to 39.2%; higher than the national average decline in poverty incidence of 1.1 percentage points). 	<ul style="list-style-type: none"> » Promote commodity value chain-oriented enterprises that will engage farmers and fishers in value-adding. » Assist farm service provider groups increase economic activity and raise incomes.
Rice Sufficiency	<ul style="list-style-type: none"> » National best in palay production at 18.44 million MT in 2013 » Second highest production growth in Asia from 2011-2013. » Self-sufficiency ratio of 96% in 2013 from 81% in 2010. 	<ul style="list-style-type: none"> » Procure from local farmers. » Keep imports within international commitment levels. » Improve competitiveness through technology and cost reduction.
Corn and Cassava	<ul style="list-style-type: none"> » National best in corn production: 98% sufficiency level. » Increased consumption as alternative staple. » Steady raw material supply for the livestock sector. 	<ul style="list-style-type: none"> » Corn processing facilities linked to private sector users. » Value-adding facilities for corn and cassava producers supplying feed processors.
Livestock and Poultry	<ul style="list-style-type: none"> » New export markets and products. » Improved facilities (abattoirs, processing plants). 	<ul style="list-style-type: none"> » Maintain foot-and-mouth disease and avian influenza virus-free status. » Establish Class AAA export facilities in Batangas and Tarlac. » Implement Food Safety Act for consumer protection and export readiness
Fisheries	<ul style="list-style-type: none"> » Reversed decline in yield. Improved export performance. Sustainable fishing grounds. » Completed registration of 1 million fishers. » Multi-species hatcheries and supervision of mangrove growing under contract with 62 state universities and colleges. 	<ul style="list-style-type: none"> » Intensify fishery-based inclusive, value-adding enterprises in seaweed industry and aquaculture. » Improved returns to fishers.
Coconuts	<ul style="list-style-type: none"> » Intensified replanting (175,000 ha), fertilization (213,031 ha), and intercropping 	<ul style="list-style-type: none"> » Establish coconut agro-industrial hubs in coconut-producing areas.
Sugarcane	<ul style="list-style-type: none"> » Stabilized local prices. » Maintained export markets in the world and the U.S. quota. » Operationalized 28 block farms in convergence with DAR and DA composed of 1,206 enrollees with a total area of 883 hectares. 	<ul style="list-style-type: none"> » Product diversification toward bioethanol production and power generation from sugarcane while supplying domestic and export sugar requirements.
Coffee	<ul style="list-style-type: none"> » Planted 5,889.12 hectares and provided 4,925,683 seedlings with bearing trees totaling 1,256,418 to date. » Provided community-level coffee roasting centers. 	<ul style="list-style-type: none"> » Expand areas planted to about 15,044 hectares. » Establish additional coffee roasting facilities.
Cacao	<ul style="list-style-type: none"> » Planted 2,405.84 hectares and provided 1,270,334 seedlings. » To date, total number of bearing trees reached 82,220 	<ul style="list-style-type: none"> » Expand areas planted to about 15,790 hectares. » Establish additional nurseries and budwood gardens. » Partnerships with international players for technical and marketing support
Vegetables	<ul style="list-style-type: none"> » Compliance with GAP requirements for the export of shallots. New export markets for other spices. » Branding of local products. » Diversification of vegetable production areas including Iloilo and Oriental Mindoro. 	<ul style="list-style-type: none"> » Increased vegetable production through farm diversification. Stable supply of high-quality and affordable vegetables all year round.

	Mid-Term Report: What We Delivered July 2010 - June 2014	Final Term Scenario: What We Commit to Deliver July 2014 - June 2016
Organic Agriculture	<ul style="list-style-type: none"> » Assisted 40,000 hectares of agriculture areas practicing organic agriculture. » Organized League of Organic Agriculture Mayors (LOAM). » Increased awareness of economic benefits in producing organic products and health benefits in consuming the same. 	<ul style="list-style-type: none"> » Support 74,360 hectares devoted to organic agriculture. » Cluster organic production areas. » Develop database on organic agriculture.
Investments in Infra and Farm Mechanization	<ul style="list-style-type: none"> » 128,242 hectares of new irrigated land. » 2,360.62 kilometers of farm-to-market roads, irrigation, and farm mechanization. 	<ul style="list-style-type: none"> » Accelerated FMR program. » Establish service provider groups operating farm machineries for land preparation, harvesting, threshing, and drying to boost inclusive growth.
Policy, Planning, and Regulation	<ul style="list-style-type: none"> » Passage of the Food Safety Act in August 2013. » Negotiated extension of Special Treatment (ST) for rice under WTO Agreement. 	<ul style="list-style-type: none"> » Strong Food Safety Regulatory System that will protect consumer health and will facilitate market access for local good and good products.
Farm Credit and Guarantee Schemes	<ul style="list-style-type: none"> » Over Php 500 million in Sikat Saka loans to 5,833 farmers accessing loan proceeds through ATM cards. » Php 258 million loans released to 4,688 agrarian reform beneficiaries (ARBs). » Provided guarantees for agri loans worth more than Php 56 billion and loans to 1.4 million farmers and fishers. 	<ul style="list-style-type: none"> » Packaging of loan schemes connecting producers to commodity value chains.
Crop Insurance	<ul style="list-style-type: none"> » Increase in crop insurance coverage by 392.52% benefiting 743,589 farmers compared to 150,976 farmers covered in 2010 and covering 506,027 hectares by 2013 from 157,444 hectares in 2010. 	<ul style="list-style-type: none"> » Provide insurance protection to Php 97.29 billion-worth of agricultural properties and loans for about 2.84 million farmers and fishers. » Develop weather index-based insurance.
Markets	<ul style="list-style-type: none"> » Accreditation of processing plants and products for export markets. » 25% increase in agri-based exports in 2013 to US\$ 6,318 million; trade deficit down 53% 	<ul style="list-style-type: none"> » Upgrade standards to levels acceptable in target export markets. » Establish enterprises based on Provincial Commodity Investment Plans.
Research, Training and Extension	<ul style="list-style-type: none"> » Climate-resilient varieties mainstreamed. » Coordinated diversified extension systems. » Designed farm machineries fabricated by the private sector. 	<ul style="list-style-type: none"> » Strengthen R&D support for commodities with specific needs as derived from the value chain analysis. » Achieve 3 horsepower per hectare mechanization level by 2016.
Climate Adaptation and Mitigation	<ul style="list-style-type: none"> » Approval of the AMIA as the core strategy in mainstreaming climate change in DA programs, plans, and budget. » Developed Vulnerability and Suitability Assessment Tool used for prioritization of PRDP projects. 	<ul style="list-style-type: none"> » Increased policy implementation efficiency and accountability. » Establish "all-weather" and client-responsive agri-fishery support services.
Rehabilitation of Stricken Areas	<ul style="list-style-type: none"> » Rehabilitation plan in place. » Timely rice harvest in Yolanda areas. » Accelerated rehab plan exceeds target to clear 390,000 coconut trees by May 2014. Some 720,328 trees cleared by June 2014. » Growing of food staples and vegetables prioritized. 	<ul style="list-style-type: none"> » Restoration of farming and fishing production, and post-harvest infrastructure and facilities.
Governance	<ul style="list-style-type: none"> » Developed "geotagging" as monitoring tool for infrastructure projects. Demonstrated its value in Mindanao. » Prepared the Philippine Rural Development Project, the DA's platform for reform. 	<ul style="list-style-type: none"> » Complete "geotagging" of Luzon and Visayas FMR projects. » Initiate reforms under the PRDP.

The Farmers in their Numbers

The Registry System for Basic Sectors in Agriculture (RSBSA) is a collaborative effort of the Department of Agriculture with the Department of Budget and Management, the Department of Interior and Local Government, the

Department of Agrarian Reform, Local Government Units and the National Statistics Office. Registration of farmers, farm laborers and fishers began in 2012. Below is a partial summary as of July 2014 covering 71 provinces.



REGISTRY SYSTEM FOR BASIC SECTORS IN AGRICULTURE

1

The Agri-Fishery Sector in the National Economy



A mini combine harvester designed by Philippine Center for Postharvest Development & Mechanization.

OVER the past three years, Agri-Fishery grew by 6.6 percent, from Php 662.7 billion in 2010 to Php 706.6 billion in 2013, even as its share in the total gross domestic product (GDP) contracted slightly, from 11.6 percent to 10.4 percent. It continues to employ almost one-third of the total labor force, about 11.8 million persons in 2013.

Overall Performance of Agri-Fishery

A farmer uses a mechanical rice transplanter designed by the Philippine Center for Postharvest Development & Mechanization to plant rice. DA encourages farmer groups to mechanize their production processes — from planting to harvesting — to increase efficiency and lower cost of production in the long run, as part of its farm mechanization program.



IN the past three years, the Agri-Fishery sector grew by 6.6 percent from Php 662.7 billion in 2010 to Php 706.6 billion in 2013 (Table 1) despite being constantly beset by extreme climate conditions such as typhoons and extended periods of rain and drought.

The share of the sector in terms of gross value added (GVA) to the total gross domestic product (GDP) contracted slightly over the same period, from 11.6

percent to 10.4 percent, brought about by the strong growth of the Industry and Services sectors.

In addition to its production value, its share as raw material for Manufacturing expanded from 46.6 percent in 2010 to 48.7 percent in 2013, although not all of this is locally-sourced.

Meanwhile, Agri-Fishery continues to provide income to almost one-third of the total labor force, employing about 11.8 million persons in 2013.

Table 1. Agri-Fishery sector's contribution to the national economy, 2010 and 2013

	2010	2013	Growth, %
GDP at constant prices (in million Php)	5,701,538	6,765,459	18.66
Agriculture	662,665	706,619	6.63
Industry	1,859,516	2,219,434	19.36
Services	3,179,359	3,839,405	20.76
Share in GDP (in %)			
Agriculture	11.62	10.44	-10.12
Industry	32.61	32.81	0.60
Services	55.76	56.75	1.78
Share of Agri in Manufacturing (in %)	46.57	48.67	4.50
Number of employed in agri-fishery (in '000 persons)	11,956	11,835	-1.01
Share of employed persons in agri-fishery (in %)	33.18	31.05	-6.42

Source: Philippine Statistics Authority (PSA)-National Statistical Coordination Board (NSCB), PSA-Bureau of Labor and Employment Statistics (BLES)



Woman farmer Trinidad Vicente-Velasco is considered a veteran rice grower in her Pangasinan community, earning her a spot in the 2013 Outstanding Rural Women. Thanks to farmers like Velasco, palay contributed 20 percent to the total output of the crops subsector in 2013, which comprised 51 percent of the agricultural yield for the year

Top Contributors to Agriculture Performance

The growth of the agriculture sector in the first quarter of 2013, as well as the resiliency it exhibited in the last quarter following the series of natural calamities that beset the country, reinforced the overall performance of the sector for the year, leading to a 1.1 percent growth from 2012.

About 80 percent of the Php 706.62-billion GVA in Agri-Fishery is accounted for by palay, fisheries, livestock, poultry, corn, banana, coconut (including copra), and pineapple (Table 2).

The Department of Agriculture continues to invest in agri-fishery infrastructure and deliver technical and extension services to support these subsectors, which contribute substantially to the share of the Agri-Fishery sector in the whole economy

Table 2. Eight commodities that make up about 80% of total agricultural output, 2013

COMMODITY	GVA in million pesos at constant prices	Share
1. Palay	143,852	20.36
2. Fishing	131,003	18.54
3. Livestock	94,915	13.43
4. Poultry	77,682	10.99
5. Corn	40,098	5.67
6. Banana	31,636	4.48
7. Coconut (including copra)	29,429	4.16
8. Pineapple	15,745	2.23
TOTAL	564,359	79.87

Source: Philippine Statistics Authority - NSCB, as of May 2014.

□ Highest in Growth Rate

The following commodities recorded the highest rates of increase last year: round scad (galunggong), tobacco, onion, mango, cassava, dairy, chicken, egg-

plant, milkfish (bangus), and yellowfin tuna (Table 3). Three fishery commodities (round scad, milkfish, and yellowfin tuna) figured in the list this year, exhibiting the recovery experienced by the fishery sector.

Table 3. Top ten commodities that recorded highest production growth, 2013

COMMODITY	VOLUME (in thousand MT)		Growth. %
	2010	2013	
1. Round scad	233.48	273.24	17.03
2. Tobacco	48.08	53.75	11.79
3. Onion	124.83	134.16	7.47
4. Mango	768.24	816.20	6.24
5. Cassava	2,223.13	2,360.53	6.18
6. Dairy	18.45	19.46	5.47
7. Chicken	1,479.43	1,553.50	5.01
8. Eggplant	211.86	219.88	3.79
9. Milkfish	391.32	405.79	3.7
10. Yellowfin Tuna	125.26	129.89	3.7

Source: Philippine Statistics Authority (PSA) - Bureau of Agricultural Statistics (BAS). Performance of Philippine Agriculture, January-December 2013

□ Agricultural Trade: Top Exports

Agricultural exports rebounded strongly from the decline in the previous year with earnings totaling US\$ 6,318 million, a 25.4 percent increase from US\$ 5,038 million in 2012 (Table 4). The share of agriculture to the country's total exports also expanded by 21.0 percent from 2012.

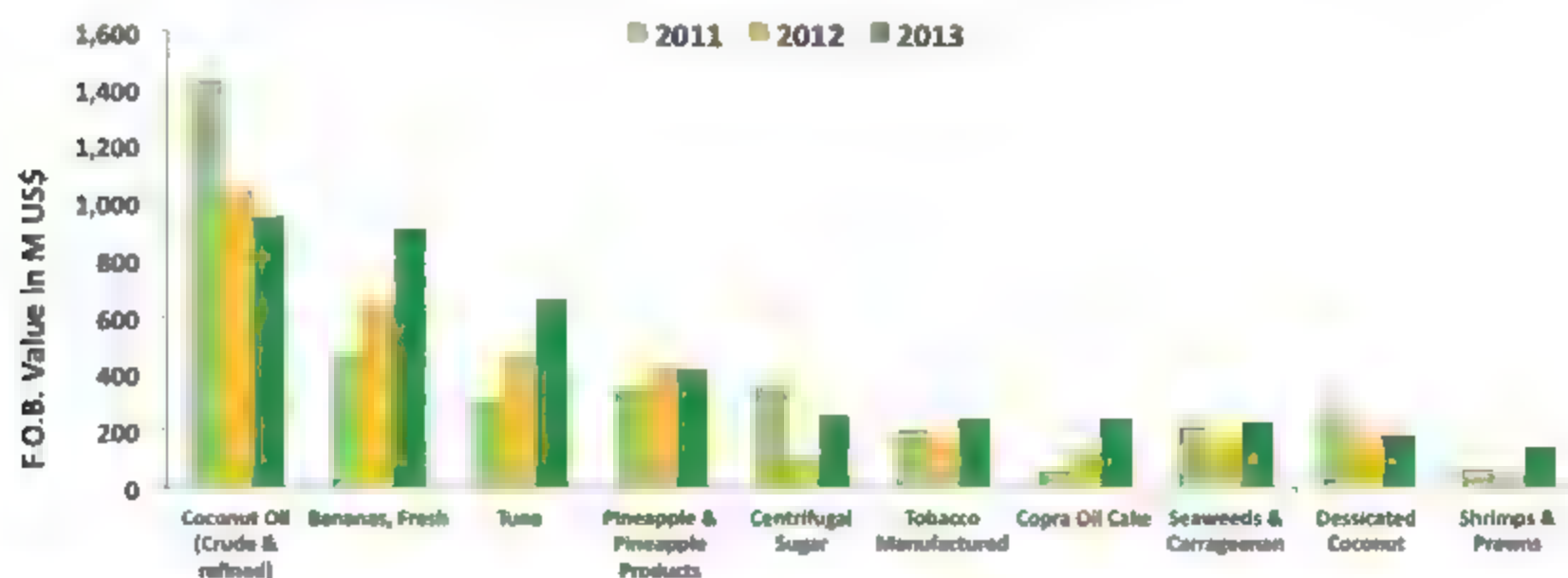
The total earnings from the Top 10 agricultural exports grew by 25.8 percent from US\$ 3,359 million to US\$ 4,225 million (Figure 1).

Coconut oil remains the top agricultural ex-

port despite an 8.7 percent decrease in value from US\$ 1,041 million in 2012 to US\$ 951 million in 2013 brought about by the decrease in the world price of the product. The value of desiccated coconut likewise decreased by 8.0 percent.

Copra oil cake, a coconut byproduct used as livestock feed, grew by 93 percent propelling it to 7th place in the Top 10 exports. Also entering the Top 10 are exports of shrimps and prawns, which almost quadrupled to US\$ 140 million in 2013 from US\$ 37 million in 2012. These two commodities replaced

Figure 1. Value of Philippine agricultural exports in F.O.B. million US\$, 2011-2013



Source: PSA-BAS, Updates on Agricultural Trade Performance, January-December 2013



DA has embarked on a systematic, nationwide fertilization program to rehabilitate coconut plantations and increase production. To increase the income of farmers, it also promotes intercropping as shown in the BPI-certified Nestle Experimental & Demonstration Farm in Tagum, Davao Del Norte (right photo). Coconut oil remains the top agricultural export product in 2013. Other high value coconut products like virgin coconut oil, copra cake, and organic coconut flour and chips are produced by companies like SC Global in Baybay, Leyte (left photo).

milk and cream products and manufactured fertilizer which are mainly re-exported.

The rest of the commodities in the Top 10 posted growth in export earnings. Next to shrimps and prawns, the fastest growth was posted by centrifugal

sugar with a 130 percent increase from the previous year's revenues.

Other agricultural exports also swelled in earnings by about 25 percent to US\$ 2,093 million in 2013 from US\$ 1,679 million in 2012.

Table 4. Agricultural export & imports, Philippines, FOB & CIF value in million US\$, Jan-Dec 2011-2013

	Jan-Dec 2011	Jan-Dec 2012	Jan-Dec 2013	Growth Rate (%)	
				2012	2013
A. Exports (FOB Value in M US\$)					
Total Exports	48,304.93	52,099.52	53,978.27	7.86	3.61
Total Value of Agricultural Exports	5,431.76	5,037.94	6,318.00	(7.25)	25.41
Top 10 Agricultural Exports	3,712.61	3,359.07	4,224.97	(9.52)	25.78
Other Agricultural Exports	1,719.15	1,678.87	2,093.03	(2.34)	24.67
% of Agric. Exports to Total Exports	11.24	9.67	11.70	(14.01)	21.04
B. Imports (CIF Value in M US\$)					
Total Imports	64,096.59	65,839.34	65,130.62	2.72	(1.08)
Total Value of Agricultural Imports	7,839.93	8,168.33	7,801.79	4.19	(4.49)
Top 10 Agricultural Imports	3,732.61	4,108.71	3,809.11	10.08	(7.29)
Other Agricultural Imports	4,107.32	4,059.62	3,992.68	(1.16)	(1.65)
% of Agric. Imports to Total Imports	12.23	12.41	11.98	1.43	(3.45)
C. Balance of Trade (in M US\$)					
	(2,408.17)	(3,130.39)	(1,483.79)	29.99	(52.60)

Note: *Preliminary data.

Source of basic data: PSA-National Statistics Office (NSO) (PSA-BAS Updates on Agricultural Trade Performance, January-December 2013)

Milkfish harvests were bountiful in 2013 and posted a 3.7 percent growth compared to the previous year. With yellowfin tuna (also 3.7 percent) and the top performer round scad (17.0 percent) milkfish made it to the top 10 commodities that recorded the highest production growth in 2013, demonstrating the recovery of the fisheries sector. Milkfish also made it to the list of emerging fishery exports in 2013 together with tilapia fillet, halibut, live crabs and eels, and lapu-lapu.



Emerging fishery exports in 2013 consist of tilapia fillet, halibut, live crabs and eels, lapu-lapu, and milkfish (Table 5).

The value of the Top 10 agricultural imports, however, declined by 7.3 percent equivalent to US\$ 299.6 million as a result of the significant reduction in the values of rice imports by US\$ 266.0 million, wheat by US\$ 107.7 million, manufactured

fertilizer by US\$ 66.9 million, and urea by US\$ 55.7 million (Figure 2).

Meanwhile, the trade deficit in Agriculture dropped to US\$ 1.5 billion in 2013, down by 52.6 percent from US\$ 3.13 billion in 2012 (Figure 3). A trade surplus of US\$ 39.2 million was noted in March, while the highest deficit occurred in November with US\$ 219.6 million.

Table 5. Emerging fishery exports, 2012-2013

COMMODITY	FOB Value in Million US\$		Growth, %
	2012	2013	
Tilapia Fillet, Frozen	17.23	62.95	265.31
Halibut, in airtight containers	29.18	49.03	68.00
Crabs, Live	35.16	38.71	10.10
Lapu-Lapu Breeder	33.05	37.97	14.90
Eels, Live	15.35	31.85	107.46
Milkfish (Bangus), Frozen (excluding livers and roes)	6.89	19.24	179.26

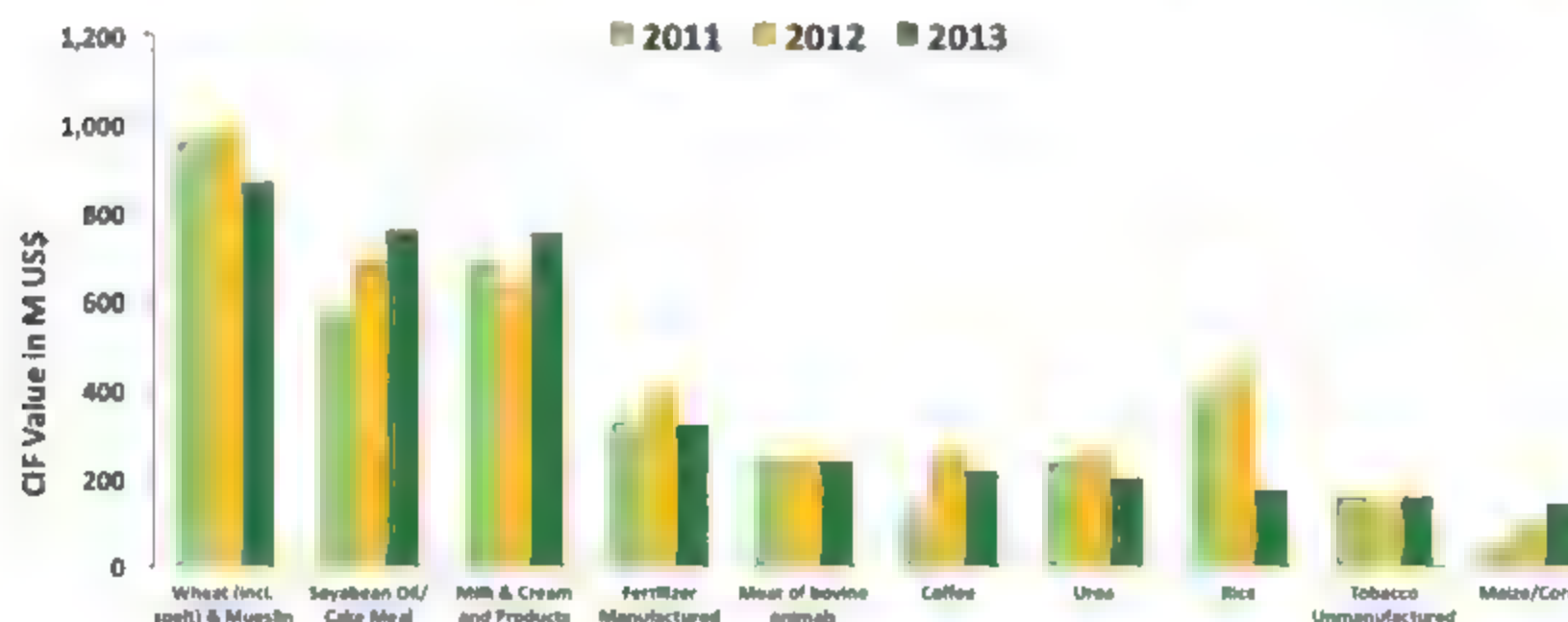
Note: *Preliminary data. Ranked based on value.

Source: Philippine Statistics Authority (PSA) - Bureau of Agricultural Statistics (BAS). March 2014.



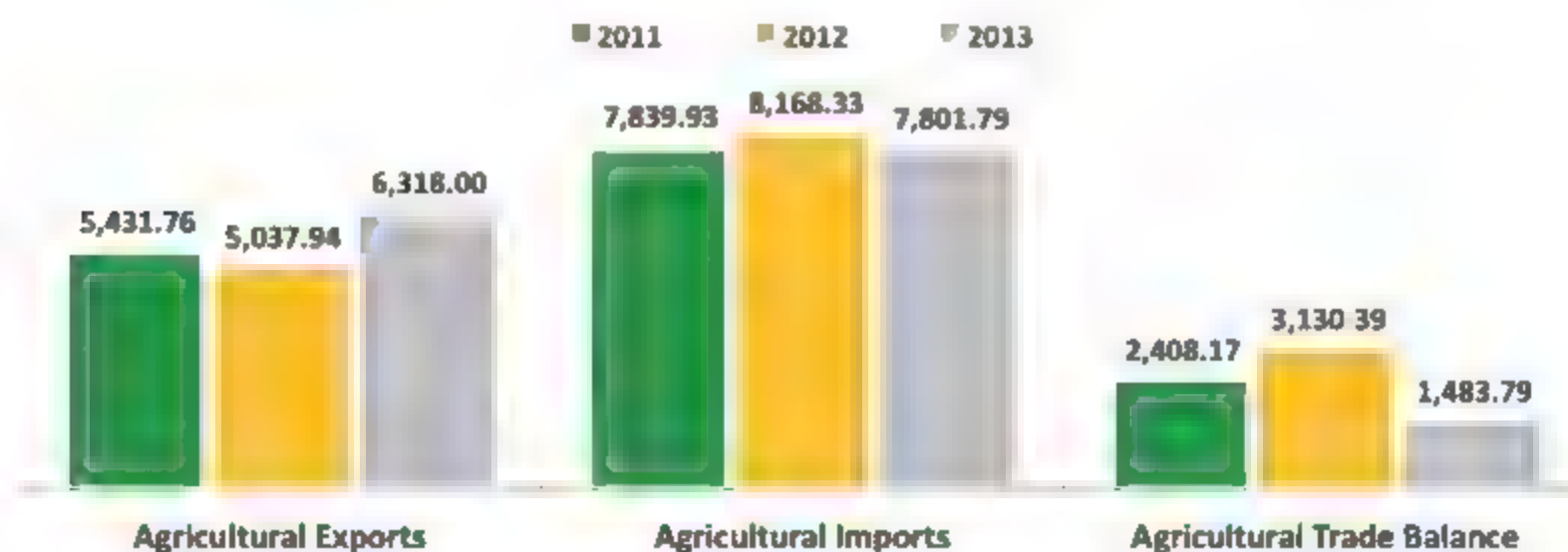
Emma Dagsil of Rapu-rapu, Albay distributes seaweeds in a solar dryer tray. Seaweed and carrageenan is one of the top 10 agricultural exports of the country

Figure 2. Value of top ten agricultural imports, CIF value in million US\$, 2011-2013



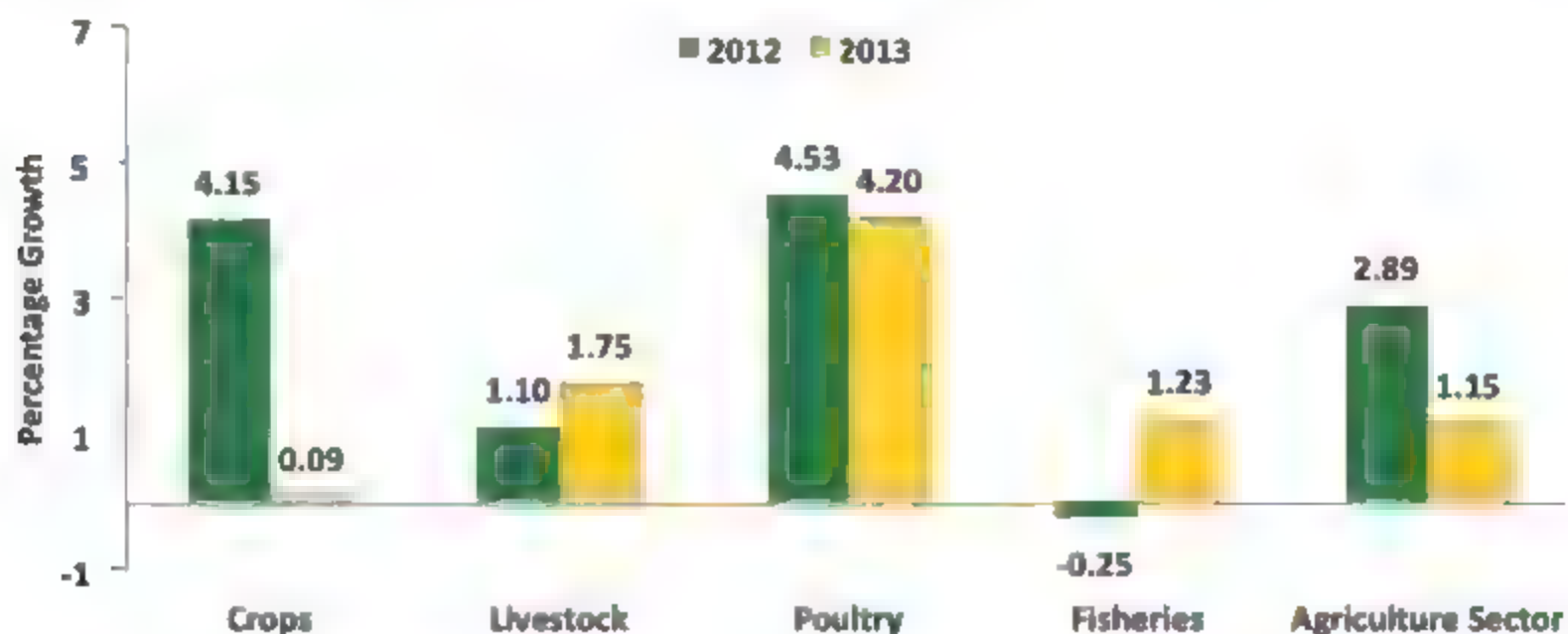
Source: PSA-BAS, Updates on Agricultural Trade Performance, January-December 2013

Figure 3. Agricultural exports, imports, and trade balance, 2011-2013 (Value in million US\$)



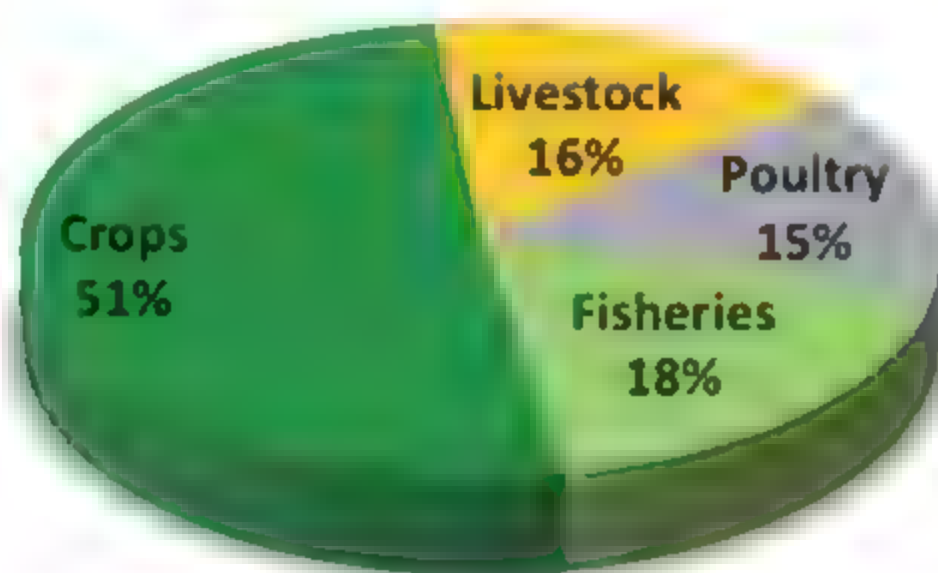
Source: PSA-BAS, Updates on Agricultural Trade Performance, January-December 2013

Figure 4. Performance of Agri-Fishery by subsector, 2012-2013



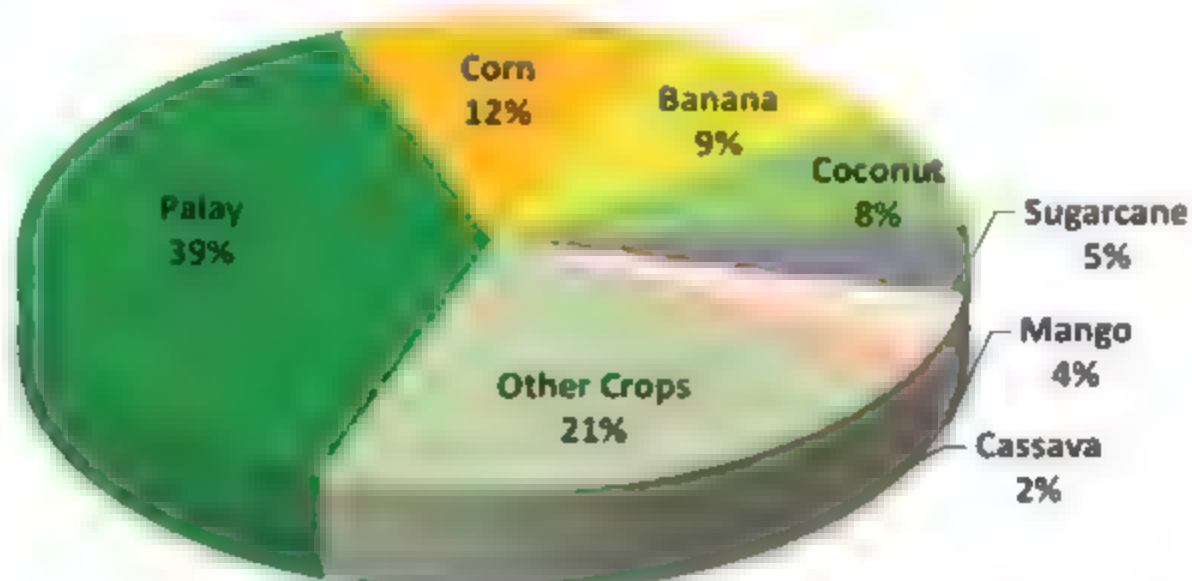
Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013

Figure 5. Percentage distribution of output in Agri-Fishery by subsector, January-December 2013



Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013

Figure 6. Percentage distribution of output in crops, 2013



Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013.



Cattle in a stock farm in Masbate mill around their pens. Livestock production grew by 1.8 percent, next only to poultry (4.2 percent). Livestock contributed 16 percent of total agricultural output after crops (51 percent) and fisheries (18 percent) and ahead of poultry (15 percent).

□ Sustained Growth in Agricultural Output

Despite the calamities faced by the sector, agricultural output grew by 1.2 percent in 2013 (Figure 4). This was led by the poultry and livestock subsectors, which grew by 4.2 and 1.8 percent, respectively. The fisheries subsector, meanwhile, recovered from the previous year's setback, growing from a negative 0.3 percent in 2012 to 1.2 percent in 2013. The crops subsector also managed to grow slightly by 0.1 percent.

At current prices, the value of agriculture production amounted to Php 1.5 trillion.

Figure 5 shows the breakdown of agricultural output by subsector, in which crops led the way with 51 percent followed by fisheries with 18 percent, livestock with 16 percent, and poultry 15 percent.

Despite the declines in output in corn, banana, coconut, and sugarcane (Table 6), the 2.3 percent increase in palay production still had a significant impact, having the biggest share among all crops with 39 percent (Figure 6). The strong growth in mango and cassava also helped buffer the output declines in other crops.

Table 6. Value of production, crops subsector, 2012-2013

TYPE OF CROP	Value (in M Php, at constant prices)		Growth, %
	2012	2013	
Palay	150,751.11	154,153.38	2.26
Corn	49,033.28	48,836.27	-0.40
Banana	39,118.24	36,657.64	-6.29
Coconut	32,676.50	31,610.56	-3.26
Sugarcane	20,588.80	19,161.81	-6.93
Mango	13,974.29	14,846.68	6.24
Cassava	7,936.57	8,427.09	6.18
Other Crops	82,638.22	83,381.50	0.90
TOTAL	396,717.02	397,074.94	0.09

Note: *Preliminary data. Ranked based on value.

Source: Philippine Statistics Authority (PSA) Bureau of Agriculture Statistics (BAS), Performance of Philippine Agriculture, 2012-2013.

A coffee farmer shows off the healthy berries in his farm. Average farmgate prices of coffee grew by 2.7 percent on strong demand from processors. Sugarcane prices likewise rose by 1.2 percent and cabbage by 13.8 percent.



Farmgate and Market Prices

Farmgate prices in the crops subsector recovered from the decline in 2012 with an average gain of 2.0 percent this year. Due to the high demand from traders, palay farmers enjoyed higher prices for their crops as the price of palay went up by 5.1 percent.

Over the period 2011-2013, palay farmers benefited from a 13.9 percent increase in the farmgate price of palay (Table 7). Notably, the combined impact of improved farmgate prices and the improvement in yield resulted in an estimated 22.4 percent increase in income from one hectare of palay.

There was also high demand for banana as fresh fruit for immediate consumption and for processing, which pushed prices up by 15.1 percent. Meanwhile, prices for camote (sweet potato) and cassava continued to post positive gains, increasing by 2.6 and 12.1 percent, respectively. This is due to the sustained demand for these commodities as food and industrial inputs.

Coffee, sugarcane, and cabbage rebounded from price declines last year. The average farmgate price of coffee grew by 2.7 percent in 2013 as processors offered higher prices. Sugarcane recorded a price increase of 1.2 percent, while a decrease in marketed quantity brought about by flooding in some trading centers combined with high demand pushed up the price of cabbage by 13.8 percent. Price cuts in coconuts continued due to the low buying price for copra, and low world prices pulled abaca and rubber prices down by 5.3 and 17.9 percent, respectively. The high supply of yellow corn also pulled down its price by 3.7 percent.

Farmgate prices this year were higher than in 2012 by an average of 2.3 percent. Prices in the livestock subsector went up by a significant 6.9 percent. Average prices in the fisheries and the poultry subsectors also increased by 1.5 and 0.1 percent, respectively.

On the consumption side, the food price index advanced 2.8 percent in 2013 compared to 2.4 percent in 2012.

Table 7. Increase in palay farmers' income due to increase in yield and farmgate price, 2010-2013

PARTICULARS	UNIT	2010	2013	Growth, %
Average yield	MT / Ha / Cropping	3.62	3.89	7.46
Annual yield (at 2 crops per year)	MT / Ha	7.24	7.78	7.46
Farmgate Price	Php per Kg	14.87	16.93	13.85
Proceeds	Php per Hectare	107,658.80	131,715.40	22.35

Source: Philippine Statistics Authority (PSA) Bureau of Agricultural Statistics (BAS)

2

Delivering Commitments



Restoration of the country's mangrove forests is a crucial step toward mitigating the adverse effects of climate change

DA's outcome statements for the period 2013–16, as affirmed in the updated Philippine Development Plan 2014–16, consist of the following: 1) Productivity in agriculture and fisheries sector increased; 2) Forward linkage to the Industry and Services sectors increased; and 3) Sector resilience to climate change risks increased.

The high points for each of these outcomes are the following:

- 96 percent rice sufficiency attained; Php147 billion decrease in the rice import bill; 45 percent increase in white corn per capita consumption from 7 kilograms in 2009 to 10 kilograms in 2012.
- Improvement in the agriculture trade balance by 52.6 percent due to increase in agri-exports by 25.4 percent; passage of the Food Safety Law enhancing capacity for trade; opening of new markets and launching of new export commodities.
- A major policy shift to investment in public goods from scandal-ridden production support. Completed system-by-system inventory of unfinished projects. Lining of irrigation canals, concreting of farm-to-market roads, investment in farm mechanization.
- NEDA Board approval of the Philippine Rural Development Project (PRDP) that will serve as DA's platform for Agri-Fishery modernization.

Food Staples Sufficiency: Historical Best

Palay production reached a historical best of 18.4 million tons in 2013 spurred by an expansion in harvest areas and improvement in yield. Photo shows a rice harvest festival in Davao, one of the many promoted by DA, that featured farm mechanization as a means for more efficient and effective recovery of grains.



Through its **Food Staples Sufficiency Program (FSSP)**, DA came close to achieving its main goal of rice sufficiency in 2013. As a result of interventions provided by the program, intensive advocacy campaigns, and the President's declaration of 2013 as the National Year of Rice, the country is now 96 percent self-sufficient in rice despite typhoons — such as *Yaring*, *Lubyo*, *Olette*, and *Santi* — that adversely affected rice-producing areas.

For 2013, palay production reached 18.4 million metric tons (MT), 2.3 percent higher than the 2012 output of 18.0 million MT (Table 8) due to the expansion in harvest areas by 1.2 percent and the improvement in yield by 1.3 percent.

While short of the 100% sufficiency target, the rice production performance was the best ever achieved in the Philippines. It was ranked second best in Asia in 2013 in the May 2014 issue of the *USDA*

Grain: World Markets and Trade Report. The same report ranked the Philippines first by 2014.

As a result of the production gains, rice importation continued to decrease from 2.4 million MT in 2010 to 271,512 MT in 2013 (Table 9). The National Food Authority (NFA) concentrated on local procurement to manage the over-importation in the past. The cost of NFA imports alone from 2008 to 2010 reached an average of Php 63.5 billion per year. This was significantly reduced in 2011 to 2013 when NFA imports averaged Php 14.4 billion per year, translating to a reduction in the rice import bill by a total of some P147 billion over three years or an average of Php 49.1 billion per year.

The sustained growth in production also allowed DA to facilitate the exportation of 300 MT of premium and organic rice to Canada, China, France, Germany, Hong Kong, Malaysia, the Netherlands,

Table 8. Palay production, harvest area, and yield estimates, 2010-2013

PARTICULARS	2010	2011	2012	2013	Growth (%) 2012-13
Palay production ('000 MT)	15,772	16,684	18,032	18,439	2.26
Harvest area ('000 Ha)	4,354	4,537	4,690	4,746	1.19
Yield / Ha (MT)	3.62	3.68	3.84	3.89	1.30

Source: Philippine Statistics Authority Bureau of Agricultural Statistics.

Table 9. Summary of rice importation, 2008-2013

Year	Authorized Imports (MT)	Actual Imports (MT)
2008	2,679,801.50	2,390,748.14
2009	1,948,000.00	1,842,806.12
2010	2,633,946.34	2,369,403.43
2011	1,210,000.00	1,063,985.41
2012	850,000.00	692,220.74
2013	368,700.00	271,511.80

Source: National Food Authority (NFA), April 2014.

Singapore, Switzerland, United Arab Emirates (UAE), and the United States.

The participating exporters were Alter Trade Corp., CPW SA, Don Bosco Multipurpose Cooperative, Pecuaría Development Cooperative, Inc., Rice Terraces Farmers' Cooperative, SL Agritech Corporation, Tardo Pilipinas, Inc., and Vegetable Importers Exporters and Vendors Association of the

Philippines, Inc.

The achievements related to food staples sufficiency attributed to various program interventions are briefly reported below.

The **irrigation component** of the FSSP implemented by the National Irrigation Administration (NIA) accomplished the following in 2013: 31,245 hectares of new areas; 20,884 hectares of restored areas; and 122,508 hectares of rehabilitated areas (Table 10). An inventory of existing irrigation systems showed that systems that had been rendered non-operational actually decreased net available irrigated area. Due to this deterioration of existing systems, the NIA commitment of irrigated lands for the FSSP reached only 81%.

Out of the total 1.68 million hectares of developed service areas, 1.3 million hectares are classified as operational, or areas that receive appropriate water supply (Table 11), while 343,200 hectares have been rendered non-operational for various reasons such as calamities, dilapidated/deteriorated facilities that require restoration, irregular maintenance, and changes

Table 10. NIA's irrigation program under the FSSP, 2013

PARTICULARS	Target (Ha)	Delivered (Ha)	Accomplished (%)
	2013	2013	
Area generated	26 532	31 245	117.76
Area restored	23 689	20 884	88.16
Area rehabilitated	50 304	122 508	243.54
Harvest Area	2 515 180	2 307 384	91.74

Source: National Irrigation Administration.

Table 11. Status of irrigation development, by type of system, operational and non-operational, as of December 31, 2013

	Area (in Hectares)
POTENTIAL IRRIGABLE AREA	3,019,608.99
DEVELOPED AREA as of December 31, 2013	
National Irrigation Systems (NIS - 245)	740,213.74
Communal Irrigation Systems (CIS - 10,651)	576,419.15
Private Irrigation Systems (PIS - 16,808)	194,620.25
Other Government-Assisted Irrigation Systems (OGA-IS - 6,623)	167,342.22
TOTAL DEVELOPED AREA	1,678,595.36
Operational	1,335,395.29
Non-Operational	343,200.07
% of Irrigation Development	55.59
Remaining Area to be developed as of Dec. 31, 2013	1,341,013.63

Source: National Irrigation Administration.

The recently inaugurated Maayon Communal Irrigation Project in Barangay Jebacca, Maayon, Capiz will irrigate 780 hectares of rainfed fields.



in land use that affect parts of the existing systems.

Small-Scale Irrigation Projects (SSIPs) were also implemented through the collaboration of the Bureau of Soils and Water Management (BSWM), DA-Regional Field Offices (RFOs), and local government units, especially in areas where putting up of large-scale irrigation systems is not economically viable. In addition to providing supplemental irrigation for improved productivity, these projects also provide water for fish production. Table 12 shows the accomplishments on the establishment of SSIPs in 2013 under the National Rice Program.

Under the expanded Sikat Saka Program, the **credit component** of FSSP, a total of 5,833 small farmer borrowers accessed their production loan proceeds through their individual ATM cards. Total loans released amounted to Php 464,490,676 by end December 2013. Started in 2012, farmers in their

fifth cropping cycle benefit from a declining interest rate on their loans.

Crop insurance remains a vital risk-management instrument that allows crop and animal growers and their financiers to recoup losses from natural calamities, including insect infestation and plant diseases. The Sikat Saka program also provided insurance protection to farmers, along with NIA's Early Cropping Program and the Weather-Adverse Rice Areas (WARA). In 2013, these three programs in support of the FSSP resulted in 111,518 farmer-enrollees (Table 13) with total cover provided amounting to Php 1,076 million, while area insured reached 126,202 hectares.

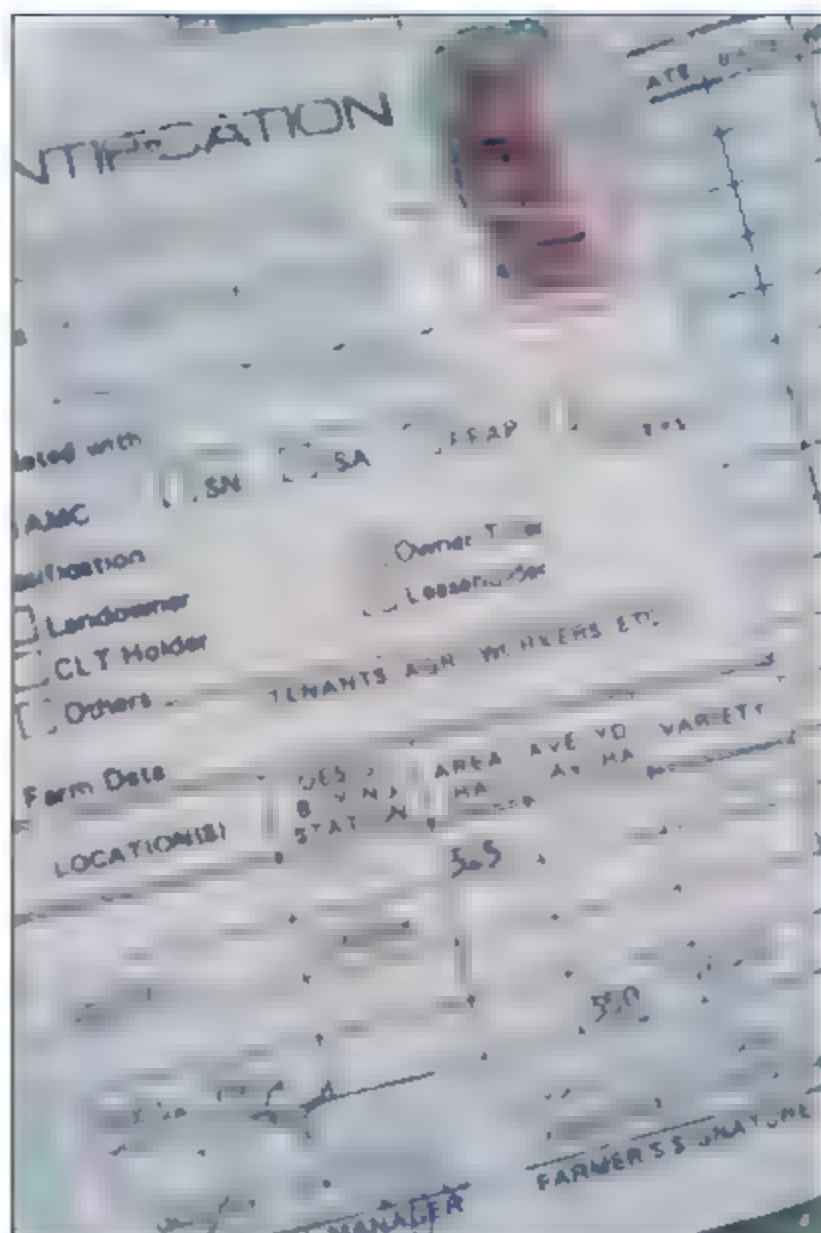
Overall, the Philippine Crop Insurance Corporation (PCIC) in its advocacy to increase enrollment in crop insurance for rural development attained dramatic growth in 2013.

With its regular insurance program, DA's Rice

Table 12. Small-Scale Irrigation Projects installed / constructed, 2013

PROJECTS	Target (No)	Delivered (No)	Accomplished, %
SWIP	113	22	19.47
DD	194	6	3.09
Spring Development	41	27	65.85
Pump and Engine Sets	256	496	193.75

Source: DA National Rice Program CY 2013 Budget Accountability Report, as of December 2013.



A farmer who availed of the Sikat Saka Program examines the ATM card given to him upon enrolling at a Land Bank branch through which he will access his loan releases. Left photo shows his NFA ID card

Insurance Programs and DAR's Agrarian Reform Beneficiary Agricultural Insurance Program, the total number of farmers covered by PCIC rose by 139 percent from 311,388 in 2012 to 743,589 farmers in 2013.

The size of farms insured expanded by 134 percent to 506,027 hectares, while total amount of insurance cover increased by 178 percent from Php 11,477 million to Php 31,867 million. The amount of insurance premium generated rose by 187 percent to Php 1,611 million.

Among those insured during the year, 67,532 filed claims and were paid a total of Php 539 million,

138 percent more than the payouts in 2012.

Causes of losses were the typhoons and floods in December 2012 (typhoon Quinta and Pablo) and in 2013 (typhoons Basing, Creseng, Labuyo, Maring, Santi, and Yolanda), sporadic occurrence of drought in some areas, and pest and diseases such as rat infestations around the country and stem borer infestation in Region IX.

All told, the PCIC earned a net income of Php 571 million, continuing the trend it started in 2012 when the agency earned Php 143 million after more than a decade and a half of net losses. Its income growth rate stood at 300 percent.

Table 13. PCIC's accomplishments in support of the FSSP, 2013

PARTICULARS	PRODUCTION			CLAIMS		
	No. of Farmers Insured	Amount of Cover (M Php)	Area Insured (Ha)	No. of Claimants	Indemnity Paid (M Php)	Area Affected (Ha)
LBP Sikat Saka Program	3,931	299.53	6,809.51	330	3.42	488.04
NIA Early Cropping Program	2,235	57.27	3,151.84	691	3.71	859.54
Weather-Adverse Rice Areas	105,352	718.81	116,241.07	10,431	20.13	16,273.26
TOTAL	111,518	1,075.61	126,202.42	11,452	27.26	17,620.84

Source: Philippine Crop Insurance Corporation (PCIC).

DA's National Rice Program invested in **farm mechanization and post-harvest facilities**. The program, in partnership with farmer groups and local government units, established warehouses and rice processing facilities and provided tractors, mechanical planters, harvesters, and other tools (Table 14). These interventions contributed to improved production and lower production cost.

Under the **research and extension component**, the Rice Crop Manager, a computer-based decision support tool, was developed by the International Rice Research Institute (IRRI) in collaboration with the Philippine Rice Research Institute (PhilRice). This tool is capable of reducing farmers' expenses from nutrient and pest management by 50 percent thereby increasing the net income of a farmer by Php 4,500 per hectare per crop.

Another development is the fertilizer requirement calculator (currently under patent application) capable of determining the precise amount of nutrients needed by irrigated lowland rice crops and prescribing a fertilization plan that will achieve target yields for specific rice varieties.

Meanwhile, to support the country's rice exports, PhilRice conducted DNA fingerprinting of 22 traditional rice varieties using 13 sequence tandem repeats (STR), otherwise termed as microsatellite DNA markers in six rice chromosomes. Unique

DNA profiles were established serving as reference genetic identity for proprietary purposes of said cultivars.

Under its Upland Rice Development Program, PhilRice distributed a total of 32,870 kilograms of quality rice seed of most-preferred traditional and modern upland rice varieties in 2013, while 50 upland Palayamanan farms were established in 44 provinces that are also intended for seed purification and seed production of most-preferred traditional varieties.

A total of 156 MT of quality rice seeds were produced from existing Palayamanan sites intended for the 2014 cropping season. Four varieties were identified as "modern upland varieties," namely, NSIC Rc192, UPLR₁ 1, UPLR₁ 3, and UPLR₁ 5.

A total of 33,970 kilograms of upland varieties were procured and distributed in 2013 for 3,714 farmer-beneficiaries. Further, starter seeds consisting of 2.7 MT of Green Super Rice (GSR) and 1.2 MT of registered seeds (RS) and certified seeds (CS) class of newly-released rainfed varieties were distributed to 603 farmers in Leyte, Sultan Kudarat, and Ilocos Norte.

The **National Year of Rice** was successfully observed throughout 2013 increasing consciousness in responsible rice consumption and promoting alternative staples. (Please see boxed section on NYR).

Table 14. Targets and accomplishments on farm mechanization under the Rice Program, CY 2013

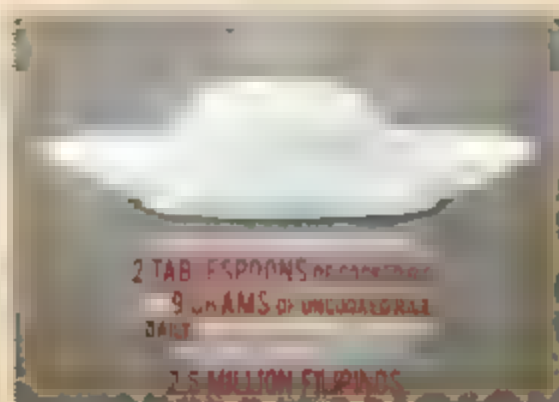
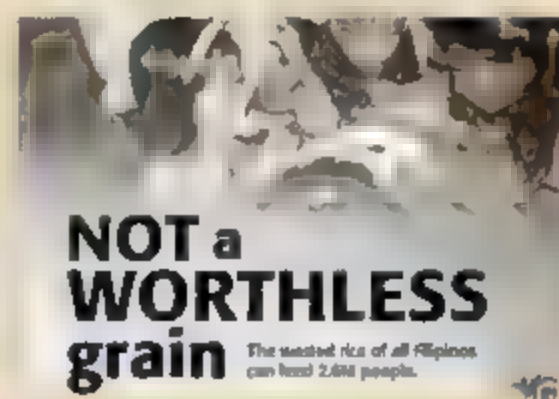
TYPE	Target (no.)	Delivered (no.)	Accomplished (%)
Production-Related			
Tractors	1 119	986	88.11
Timers	318	322	101.26
Transplanters	43	44	102.33
Sprayers	506	724	143.08
Harvester	533	351	65.85
Reapers	106	110	103.77
Bio-Mixing Plant	33	33	100.00
Post-harvest-Related			
Threshers	957	708	73.98
Multi-Purpose Drying Pavement (MPDP)	1 133	662	58.43

Source: DA National Rice Program CY 2013 Budget Accountability Report as of December 2013.

National Year of Rice

President Benigno S. Aquino III declared 2013 as the National Year of Rice (NYR), the same year that DA's Food Staples Sufficiency Program targeted 100 percent rice sufficiency. Only 96 percent was accomplished, but the Philippines harvested 18.4 million tons of palay, the highest ever in the country's history. The NYR had three

main goals: help achieve rice sufficiency, improve the income of farmers, and promote better health among rice consumers. Under the stewardship of Program Director Hazel V. Antonio the program was an unqualified success. Below are some of the promotional materials distributed and year round activities that were undertaken.



Environment for Enhanced Competitiveness

ALONGSIDE the government's goal to attain food sufficiency and sustainable production, DA also envisions Filipino farmers and fishers to be competitive both in the local and global markets. To achieve this, various interventions were carried out and investments in technologies were intensified to support the following strategies:

Improved Productivity and Production

Corn prices stabilized as a result of the strengthened coordination with major industry stakeholders — the Philippine Maize Federation, Inc., the National Corn Competitiveness Board, and the Philippine Association of Feed Millers, Inc. Production of the country's second most important grain grossed P90.22 billion. Photo shows a DA farm technician visiting a corn farm in Mindanao.



■ Corn and Cassava

In 2013, corn contributed 5.7 percent to total Gross Value Added (GVA) in Agri-Fishery (Table 2), while cassava accounted for 1.3 percent.

Corn production suffered a slight decline for the year due to extreme weather conditions that damaged corn areas. On the other hand, cassava, a more climate-resilient crop, defied the negative impacts of inclement weather and ranked fifth as one of the fastest growing crops for the year with a 6.2 percent increase in production to 2.3 million MT in 2013 from

2.2 million MT in 2012.

The farmgate price of yellow corn decreased by 5.7 percent from Php 12.62 per kilogram in 2012 to Php 11.90 per kilogram in 2013, while price for white corn increased from Php 14.34 per kilogram to Php 15.58 per kilogram over the same period.

As for cassava, farmgate price of fresh tubers increased from Php 7.09 to Php 7.63 per kilogram and dried chips from Php 7.21 to Php 7.79 per kilogram. At current prices, corn production grossed Php 90.2

Table 15. Targets and accomplishments on farm mechanization under the Corn & Cassava Program, CY 2013

	Target (no.)	Delivered (no.)	Accomplished (%)
Production-Related			
Tractors	99	98	98.99
Planters	28	14	50.00
Post-harvest-Related			
Dryers	15	15	100.00
Mechanical sheers	77	81	105.19
Cassava chippers	13	16	123.08
Cassava granulators	217	295	135.94
Village-type dryers	38	35	92.11
Silos	7	6	85.71

Source: DA National Corn Program CY 2013 Budget Accountability Report as of December 2013.

billion, while earnings from cassava amounted to Php 18.1 billion.

The National Corn Program continued its efforts to support the FSSP. Promotional activities such as infomercials, demonstrations, and development of various printed materials boosted public awareness on the benefits of consuming non-rice staples such as white corn.

Annual per capita consumption of white corn increased from 7.1 kilograms in 2009 to 10.3 kilograms in 2012 based on the PSA-BAS Survey on Food Demand. The 45 percent rise was brought about mainly by the increased consumption of corn in the Zamboanga Peninsula, Central Visayas, and Caraga.

Annual per capita consumption of cassava, on the other hand, declined to 2.8 kilograms in 2012 from the 3.1 kilograms in 2009. However, the commercial use of cassava as feed material has increased with the availability of cassava chippers and dryers.

The National Corn Program also continued its rigorous support for the establishment and distribution of production and post-harvest facilities (Table 15).

The distribution of post-harvest equipment and facilities contributed to the decrease in postharvest losses from 12.7 percent in 2012 to 7.2 percent in 2013, based on the study of the Philippine Center for Postharvest Development and Mechanization (PhilMech).

The latest survey was conducted in three major corn-producing provinces, namely, Isabela, Bukidnon, and South Cotabato. Harvesting (1.1 percent), shelling (0.5 percent), drying (4.5 percent), hauling (0.6 percent), and storage (0.5 percent) comprise the total postharvest loss level of 7.2 percent.

Apart from the regular activities funded and implemented by the National Corn Program, the sus-

tained partnerships with technical working groups and other agencies aided in the continued delivery of salient interventions in support of the country's corn and cassava industry. In 2013, these engagements involved a wide array of activities that addressed the needs of the corn and cassava sectors and made a significant impact.

DA began to export corn silage for cattle feed to South Korea in partnership with corn industry groups, Ploughshares, Inc., and the National Corn Competitiveness Board. A total volume of 280 MT valued at Php 1.2 million was shipped to South Korea from April to August 2013. This marks a significant development in the productivity and competitiveness of Filipino corn farmers.

The National Corn Program also collaborated with the BSWM for the development of a program called *Sustainable Corn Production in Sloping Areas* to address soil erosion problems in the uplands. Set to be implemented in 2014, the program enjoins other DA agencies and the private sector to support the introduction, advocacy, and training on technologies and practices for the conservation and management of rainwater and runoff, soil erosion control, rehabilitation of degraded land, and soil fertility improvement.

The Bureau of Agricultural Research (BAR) meanwhile developed an information kit on the use of *Site-Specific Nutrient Management (SSNM)* for hybrid maize, as well as a quick guide on plant nutrition and crop management with location-specific guidelines based on SSNM principles. These quick guides aid farmers in understanding the most important factors that affect fertilizer recommendations in a given region.

The Bureau of Agriculture and Fisheries Standards (BAFS) also developed the *Philippine National Standard for Fresh Rootcrop – Sweet Cassava* that serves as basis for classification, packaging, and labeling of sweet cassava.

Banana remained the top performing high value crop in 2013 in terms of production despite the devastation wrought by typhoon Pablo in major production areas in Mindanao in December 2012. Total production declined by 6.3 percent, effective yield by 6.7 percent. Photo shows a farmer monitoring the growth of his Cavendish bananas in Compostela Valley, one of the areas hardest hit by the typhoon.



High-Value Crops

Table 16 shows the performance of major high value crops in 2013. Mango production grew by 6.8 percent from the decline experienced in 2012. Cacao

stayed steady. Other crops posted declines in output but intensive replanting and area expansion for these are ongoing.

Table 16. Volume of production and yield per hectare of major high-value crops, 2012-2013

CROPS	VOLUME OF PRODUCTION (in 1000 MT)		YIELD (in MT per ha)		GROWTH (%)	
	2012	2013	2012	2013	Production	Yield
Banana	9,226.00	8,645.87	20.31	18.96	-6.29	-6.66
Pineapple	2,397.63	2,458.42	41.03	40.50	2.54	-1.28
Mango	768.24	816.20	4.07	4.35	6.24	6.80
Rubber	442.99	444.79	2.51	2.40	0.41	-4.32
Coffee	88.94	78.64	0.74	0.67	-11.58	-8.96
Cacao	4.83	4.88	0.52	0.52	0.93	0.58

Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013, March 2014

Support for High-value Fruits and Vegetables

The High-Value Crops Development Program (HVCDP) ensures that interventions and technical assistance are continuously provided to farmers to help increase production and capacitate them to be more globally competitive. These include the distribution of production and postharvest machinery, equipment, and facilities (Table 17).

Production of high-value crops was also supported by irrigation from the SSIPs provided by the

BSWM. Table 18 shows the accomplishments of the BSWM on SSIPs under the HVCDP.

Coffee

To assist coffee growers, HVCDP distributed a total of 1.6 million pieces of planting materials for some 1,200 hectares as part of its coffee expansion program. Of the trees planted, 80 percent or about 1.3 million are already bearing and produced a total of 678.6 MT of dried berries.

Coffee roasting centers were also established in

Table 17. Targets and accomplishments on farm mechanization of the High-Value Crops Development Program, CY 2013

	Target (No.)	Delivered (No.)	Accomplished (%)
Production Related			
Tractors	183	165	90.16
Rotavator	1	1	100.00
Sprayers	1,951	2,068	106.00
Mst blowers	2	2	100.00
Nurseries	138	69	50.00
Foundation scion grove/ budwood garden	5	5	100.00
Other production facilities*	12,169	11,493	94.44
Post-harvest Related			
Mechanical shellers	3	3	100.00
Mechanical dryer	1	2	200.00
Milling equipment	2	2	100.00
Stripping machine	1	1	100.00
MPDP	2	2	100.00
Solar dryer	6	5	83.33

*Note: These include rainshelters, school gardens, screenhouse, seed storage, biological control agent plant, organic/ biological fertilizer plant.

Source: DA High-Value Crops Development Program CY 2013 Budget Accountability Report as of December 2013.

Table 18. Small-Scale Irrigation Projects of the BSWM under the HVCDP, 2013

PROJECTS	Target (No)	PHYSICAL ACCOMPLISHMENT			
		Completed	Ongoing	Preparatory	Total
SFR	15	10	4	2	16
Spring Development	11	4	7	1	12
SWIP/DD	1	1	0	0	1
Windmill	6	6	0	0	6
Ram Pump	15	4	9	2	15
Solar Pump	6	6	0	1	7
TOTAL	54	31	20	6	57

*Note: Includes carry-over projects funded from savings.

Source: Bureau of Soils and Water Management (BSWM).

A farmer holds up a brace of Queen pineapples, which are reputed to be the sweetest among the four main varieties grown in the Philippines. Pineapple remains the second major high value crop in terms of volume, which grew by 2.5 percent in 2013 over the previous year.



Doña Remedios Trinidad, Bulacan and in Cabuyao, Laguna. These seek to increase income opportunities for small coffee growers by adding value to raw green coffee beans and to provide opportunities for coffee farmers/producer clusters to retail roasted coffee at the community level.

Roasting centers are currently being set up in Ambuklao, Benguet; Butuan City; Iloilo City; Sultan Kudarat, and North Cotabato.

Two coffee demonstration farms and clonal gardens were also established in the Northern Mindanao Integrated Agricultural Research Center in Bukidnon and in Aglipay, Quirino in collaboration with Nestlé Philippines, Inc. These serve as production centers for quality planting materials that are readily available for coffee farmers.

Partnership with Nestlé Philippines was also strengthened through the certification of four FRT strains of Robusta coffee comprising 61,373 clonal trees from the Tagum and Lipa stations.

Cacao

For cacao, a total of 503,345 planting materials were distributed in 2013, resulting in 667 hectares planted with cacao.

Cacao production increased slightly by 0.9 per-

cent in 2013 from the 4,831 MT produced in 2012 due to increase in harvest area and in the number of fruit-bearing trees in Tugbok and Marilog in Davao City. An increase in the number of fruit-bearing trees was also noted in Davao Del Norte.

Meanwhile, a Convergence Task Force was created to map out and integrate the initiatives of the HVCDP, the Philippine Coconut Authority, and the National Greening Program of the Department of Environment and Natural Resources - Forest Management Bureau for cacao development.

Banana

The DA has remained vigilant against the spread of crop diseases. Task Force Fusarium organized by the DA-RFO XI crafted a Short-Term Action Plan to address Fusarium wilt of banana (Panama disease). This involves advocacies for the issuance of provincial, municipal, and barangay ordinances for quarantine measures, information campaigns, training courses on the prevention of the spread of Fusarium, provision of disinfectants to affected farmers, and promotion of crop rotation (corn after banana).

A training course on Good Agricultural Practice (GAP) in banana was conducted in January 2013 in Davao City by the Agricultural Training Institute

(ATI), while geotagging of small infected farms was conducted from mid-April to June 2013.

A total of 662 farms were tagged based on the inventory of small farms submitted by LGUs in the region. Out of these, 531 farm parcels were found positive for *Fusarium*.

The Bureau of Agriculture Research is also conducting a three-year study on the disease in partnership with Biodiversity International entitled, "Mitigating Banana *Fusarium* Wilt TR4 through a Farmer Participatory Approach of Developing Disease Management Strategies."

To date, 20 farms have been planted with GCTCV 219 and Grand Naine as the control variety while farm experiments for evaluation of disease resistance and agronomic traits were established in Davao City, Davao Del Norte, and Davao Del Sur.

Preliminary results show that GCTV 219 is significantly more resistant to FOC TR4 than Grand Naine.

Mango

The HVCDP, in partnership with the Ilocos Norte Mango Stakeholders Association, Inc. and the provincial government of Ilocos Norte, implemented a Mango Rehabilitation Project in Ilocos Norte. The project, with Php 2 million worth of assistance to 300 growers and Php 5 million counterpart from the Provincial Government, covered 20,000 mango trees

of which 50 percent were century-old trees and the other 50 percent aged 10-20 years old.

Under the project, suitable and the right amount of fertilizers, such as organic, complete (14-14-14) and potash (0-0-60), were applied to the mango trees. It also involved pruning and fruit bagging.

The yield of mango increased as a result of this initiative by an average of 50 kilograms for 10-20 year-old trees (from 150 kg/tree to 200 kg/tree) and 300-400 kilograms per century-old tree (from 1,000 kg/tree to 1,300-1,400 kg/tree).

Total production of mango in Ilocos Norte increased by 7 percent from 31,966 MT in 2012 to 34,093 MT in 2013.

This made a significant contribution to the rebound of the national mango yield, from the 3.3 percent decline in 2012 to a 6.8 percent growth in 2013.

Plans are being made to expand the project to 400 more hectares of mango orchards.

Meanwhile, the U.S. Department of Agriculture (USDA), through its Animal and Plant Health Inspection Service (APHIS), declared the Philippines as free of Mango Pulp and Seed Weevil on February 8, 2013.

However, the Proposed Rule for the Expansion of Area-Freedom of the Whole Philippines from Mango Pulp Weevil and Mango Seed Weevil except for Palawan is still under the rule-making process in the U.S.

❑ Coconut

The onslaught of typhoons in 2013 affected coconut production, dragging it down by 3.3 percent while yield contracted from 4.4 MT to 4.3 MT per hectare. Typhoon *Pablo* contributed to the decrease in such harvest areas as Davao Oriental, Davao Del Norte, Compostela Valley, Agusan Del Sur, and Surigao Del Sur. Typhoons *Labuyo* and *Santi* also affected the production in Aurora, while Leyte, Eastern Samar, and Aklan suffered from typhoon *Yolanda*.

The decrease in production was also attributed to the cutting and replanting of less productive trees in Oriental Mindoro, the shift to rubber cultivation in Basilan, and cutting of trees in Batangas that were affected by scale insects.

At current prices, the gross value of coconut production went down by 8.4 percent from Php 88.8 billion in 2012 to Php 81.3 billion in 2013. This is mainly due to the decline of 5.4 percent in the farmgate price of copra.

The Philippine Coconut Authority (PCA) has stepped up its efforts to meet these challenges. It is estimated that there are approximately 3.5 million coconut farmers in the country and that the Philippine coconut industry accounts for 23 percent of world production and 59 percent of world exports. On the other hand, 41 out of every 100 coconut farmers in the country are poor. They primar-

ily rely on copra for their livelihood and gross only Php 20,000 per year.

Support Programs for Coconut Growers

In 2013, under the PCA's Salt Fertilization Project, 20 million coconut trees in some 200,243 hectares were fertilized. A total of 801,030 fertilizer bags were used, benefiting 141,646 farmers. Some 154,120 coconut farms were also replanted with 7.3 million seedlings benefiting 135,107 farmers.

The Kasaganaan sa Kanayunan ay Kaunlaran ng Bayan (KAANIB) Enterprise Development Project (KEDP) is PCA's project to support the national development goals of reducing poverty and attaining socioeconomic development along with inclusive growth in coconut farming communities.

This project has three components, namely:

1. Coconut-Coffee-Based Enterprise Development Project (COCOBED) which involves coffee production supported by provision of high quality planting materials and organic fertilizer as well as clustering of farms to achieve economies of scale,
2. Coconut Intercropping Project (CIP), which involves planting of high-value crops in between trees as well as livestock-raising, and
3. Community/Household-Level Coconut Processing Project (CHLCP), wherein coconut

The onslaught of typhoons dragged down coconut production by 3.3 percent in 2013. Typhoon Pablo affected harvests in Davao Oriental, Davao Del Norte, Compostela Valley, Agusan Del Sur, and Surigao Del Sur. Typhoons Labuyo and Santi lowered production in Aurora. Photo shows the extent of the damage caused to coconut farms in Leyte. Eastern Samar, and Aklan by typhoon Yolanda, the strongest storm to ever make landfall in the Philippines.



farmers identify and engage in coconut-based enterprises such as virgin coconut oil (VCO) production, coir processing, and food confectioneries, among others.

In 2013, a total of 427 KEDP sites were established — 223 COCOBED and 204 CIP/CHLCP — benefiting a total of 28,102 farmers. Table 19 summarizes the distribution of planting materials and livestock animals under the project.

To further assist coconut farmers in improving the quality of their products and their income, the government will establish Coconut Agro-Industrial Hubs in strategic areas. Its objectives are as follows:

1) to convert coconut farmers from traditional raw

material suppliers to direct participants in coco product processing;

2) to gradually minimize the role of traders that erode copra farmgate prices; and

3) to promote the manufacture of value-added products in an organized and economical system with minimum wastage.

Five coconut agro-industrial hubs will be established in 2014 at a total cost of Php 305 million. These will be located in Albay, Capiz, Leyte, Quezon, and Zamboanga Del Norte and are expected to generate about 50,000 jobs for farmer-beneficiaries. Location-specific packages of intervention are currently being developed.

Table 19. Accomplishments under the KAANIB Enterprise Development Project, 2013

INTERVENTIONS	UNIT	ACCOMPLISHMENT
Cacao seedlings	Number	328,250
Banana suckers	Number	470,386
Pineapple suckers	Number	345,768
OPV and hybrid corn seeds	Number of bags	193
Aquaculture (tilapia)	Number	3,000
Livestock distributed	Number of heads	10,021

Source: Philippine Coconut Authority (PCA).



Workers prepare muscovado in a sugar processing hub in Silay City in Negros Occidental. DA has been aggressively promoting muscovado as a specialty food product through trade exhibitions, both in the country and abroad. The Sugar Regulatory Administration urged a shift to the production of organic muscovado to help boost the competitiveness and survival of the industry when tariffs on imported sugar are lifted in 2015.

Sugarcane

Sugarcane production reached 24.6 million MT in 2013, down by 6.9 percent from the 2012 level due to a decline in yield by 7.4 percent from 61.0 MT per hectare in 2012 to 56.4 MT in 2013.

A decline in production due to late milling operations was experienced in Batangas and Cebu during the second half of 2013, while harvesting and milling operations in Bukidnon were also halted early in the first half of the year. Typhoon Yolanda likewise arrested milling operations in Leyte, affected yield in Iloilo, and delayed harvests in Capiz. Frequent rains impeded harvesting in North Cotabato. At current prices, sugarcane production amounted to Php 40.0 billion in 2013.

Through the promulgation of sugar production

allocation policies, the Sugar Regulatory Administration (SRA) maintained the profitability of producers while stabilizing sugar prices for both the millsite and retail markets.

From January to December 2013, domestic raw sugar millsite prices ranged from Php 1,227 to Php 1,465 per 50-kilo bag while composite price was Php 1,237 to Php 1,373 per 50-kilo bag, which was still profitable for the producers.

Wholesale prices of raw sugar ranged from Php 1,400 to 1,700 per 50-kilo bag while retail price of raw and refined sugar ranged from Php 38-44 and Php 47-50 per kilogram, respectively. The retail price of refined sugar stayed within the suggested retail price of Php 50 per kilogram.

Table 20. Level of farm productivity, sugar block farming, Batangas

BATANGAS SUGAR BLOCK FARMS (Phase 1)	FARM PRODUCTIVITY, In Tons of Cane per Hectare	
	PREVIOUS	CURRENT
Lucban MPC (Balayan)	37	48.27
Kamahari (Nasugbu)	43	48.72
Damba (Nasugbu)	41	45.42
Prenza (Lian)	50	55.00

Source: Sugar Regulatory Administration, March 2014.

Enhancing Productivity of Sugarcane Farms

The sugarcane block farming project from the convergence initiative of the DA, the SRA, and the DAR continued in 2013. The scheme, launched in Batangas in 2012, aims to enhance local sugar production by consolidating sugarcane farms owned by agrarian reform beneficiaries (ARBs) into integrated farming blocks of 30 to 50 hectares to improve productivity through economies of scale, alongside introduction of cost-efficient sugarcane farming practices.

In addition to the six block farms established in 2012 — two in Nasugbu, Batangas and one each in Concepcion, Tarlac; Pontevedra, Negros Occidental; Balayan, Batangas; and Lian, Batangas — nine more block farms were operationalized under Phase 1. Thirteen project sites have also been established under Phase 2 as of December 2013.

SRA's technical support to farmers on land preparation and planting materials, together with assistance from the Mill District Development

Council as provider of the logistical needs of sugar mills, contributed to the improvements in farm productivity in the first four block farms in Batangas under Phase 1 (Table 20).

SRA also supports product diversification and market expansion of sugarcane. Under the bioethanol program, sugarcane farmers are given an option to stabilize their farm income, even as the sugar tariff will go down to 5 percent in 2015 due to the ASEAN Economic Community integration.

SRA's active participation in the policy-making process of the National Biofuel Board (NBB) and its firm policy support for bioethanol production also further secured the confidence of investors in the government.

This stimulated their capability to produce more bioethanol, which rose from 32.4 million liters in 2012 to 71.5 million liters in 2013, an increase of 121 percent.

Around 4,000 more workers were employed both in the production facilities and sugarcane plantations for bioethanol production alone.

Livestock and Poultry

The livestock sector, which accounted for 16.2 percent of total agriculture output, continues to exhibit positive growth, posting a 1.8 percent gain in production in 2013.

This is due to the sustained uptrend in the hog subsector that grew by 2.0 percent (Figure 7). The hog subsector remains the biggest contributor in the livestock sector with 83 percent share in total output (Figure 8).

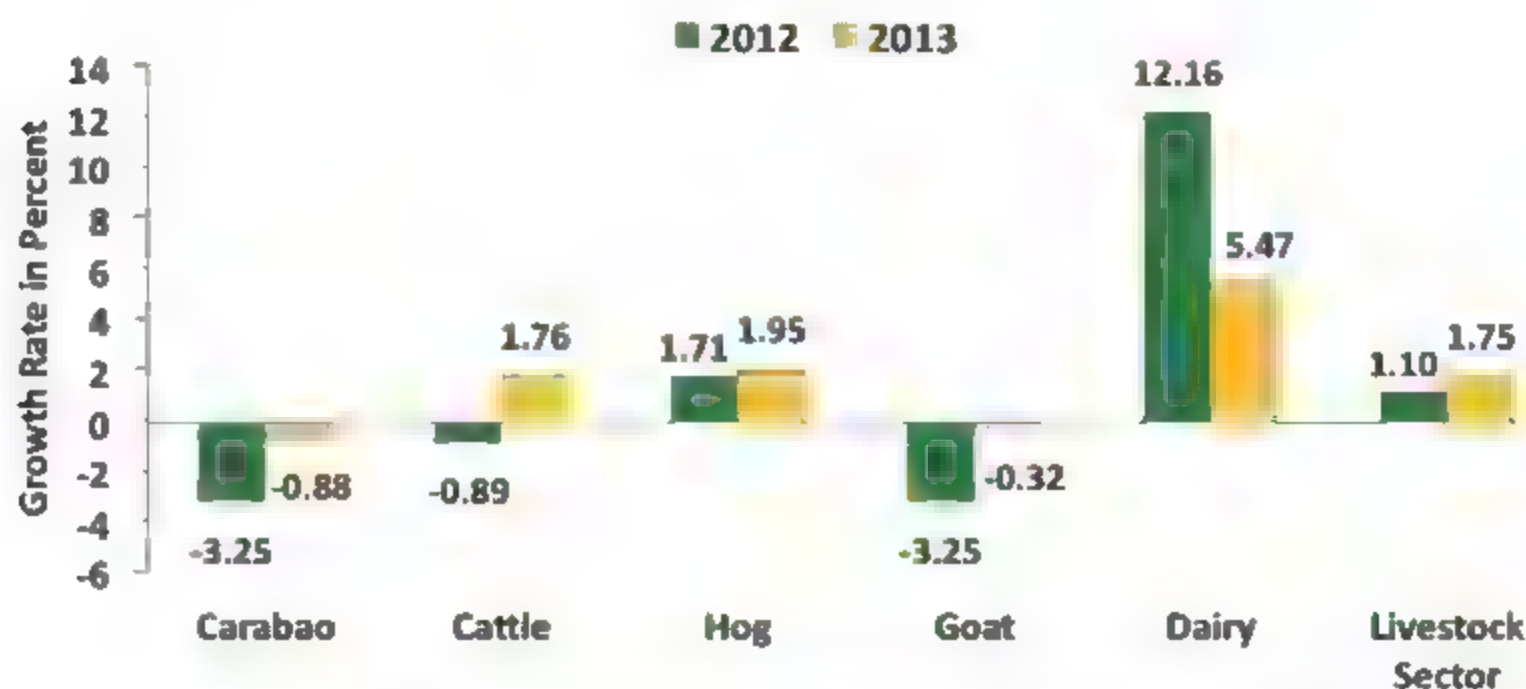
Recovering from a slump in 2012, cattle production grew by 1.8 percent in 2013 as higher demand and better prices encouraged cattle raisers in Ilocos

Region, Cagayan Valley, Central Luzon, CALABARZON, Western Visayas, Northern Mindanao, Davao Region, and SOCCSKSARGEN to dispose of and ship out live cattle.

Meanwhile, the high demand during the election period in the second quarter and the availability of stocks for slaughter in Ilocos Region, MIMAROPA, and Western Visayas contributed to the continued growth in the hog subsector.

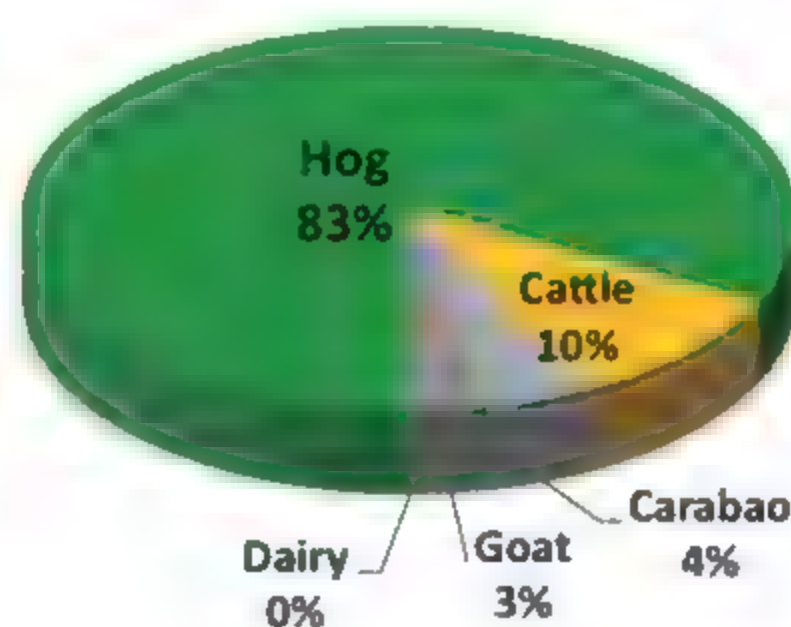
Dairy production also expanded by 5.5 percent due to increases in the number of dairy animals on the milkline.

Figure 7. Growth of livestock by subsector, 2012-2013 (in percent)



Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013.

Figure 8. Percentage distribution of livestock by subsector, 2013



Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013.

The reduction in the volume of stocks for slaughter in the Ilocos Region, Cagayan Valley, and Caraga, as well as the tendency of farmers to retain animals for draft purposes, caused carabao production to decline by 0.9 percent.

Goat production also slipped by 0.3 percent with reports of decreased number of goats slaughtered in Ilocos Region, Western Visayas, Davao Region, and SOCCSKSARGEN.

Gross earnings from the livestock sector amounted to Php 233 billion at current prices, 8.8 percent higher than the 2012 level.

The poultry sector, which accounted for 14.8 percent of total agricultural output, exhibited a slightly slower growth in 2013 compared with the previous

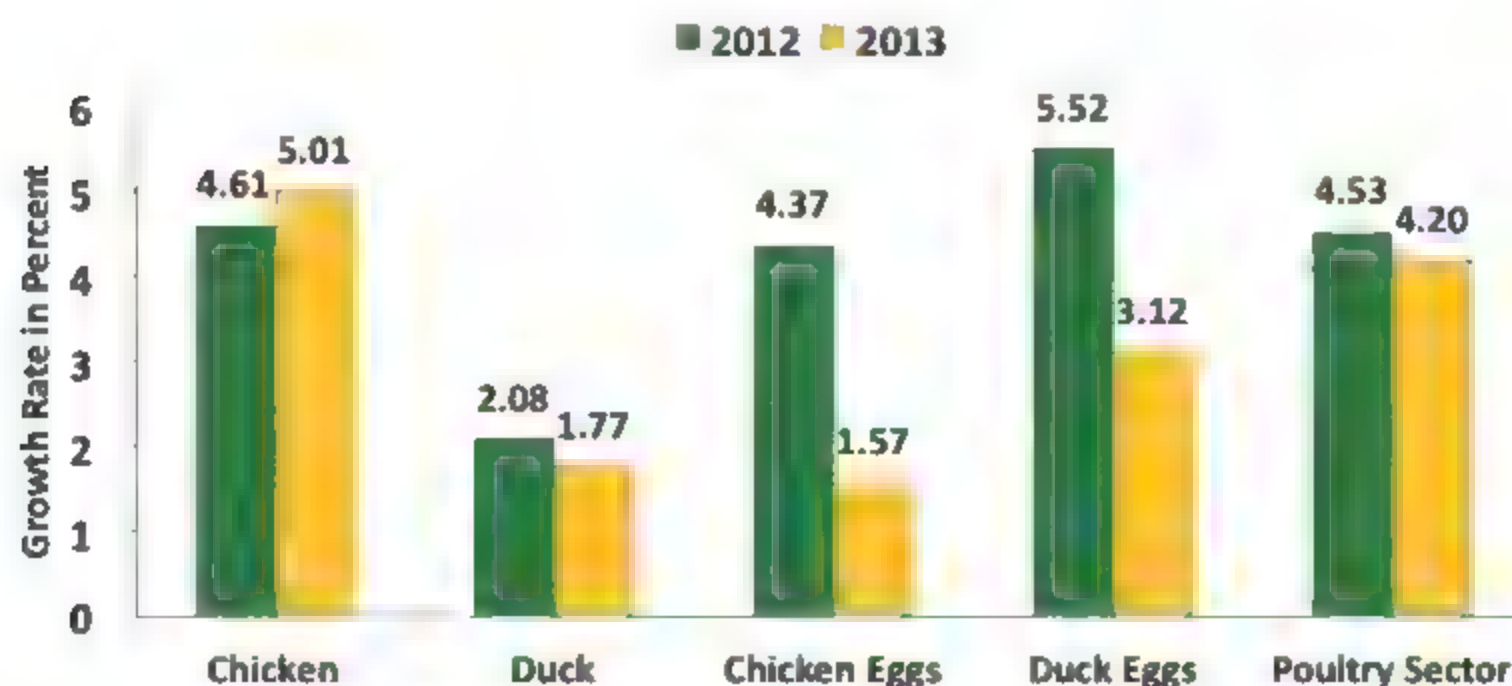
year's record, growing by 4.2 percent (Figure 9).

Chicken, which contributed 76.4 percent to the poultry output, posted the strongest growth among all the subsectors with a 5.0 percent increase. This is attributed to the expansion of broiler farms to serve the increased demand from institutional buyers in urban areas in Ilocos Region, Cagayan Valley, Central Luzon, and Bicol Region.

Chicken egg production grew by 1.6 percent with the increase in the number of laying flocks in Cagayan Valley, Central Luzon, Western Visayas, and Caraga.

Duck production grew by 1.8 percent. Expansion of commercial duck farms was noted in Central Luzon, while new investments in commercial duck

Figure 9. Growth of poultry by subsector, 2012-2013 (in percent)



Source: PSA-BAS, Performance of Philippine Agriculture, January-December 2013.

Chicken egg production grew by 1.6 percent in 2013 as the number of laying flocks increased in Cagayan Valley, Central Luzon, Western Visayas, and Caraga. Photo shows eggs being broken automatically in a production line for powdered eggs, an example of the DA's drive to promote agricultural products as raw material for manufacturing.



farms (Peking duck) intended for export were reported in Northern Mindanao and Davao Region. Initial shipments of duck meat to Japan were made in 2013.

Meanwhile, the 3.1 percent increase in output in duck egg production was attributed to the larger laying flock and high egg-laying efficiency ratio in Central Luzon and Caraga, and the increased demand for "balut" (fertilized egg) and salted egg.

New Accreditations for Export of Poultry Meat

The Philippines has been free from Foot-and-Mouth Disease (FMD) since 2010 and from the Highly-Pathogenic Avian Influenza (HPAI) since 2005, allowing the country to export beef, pork, chicken, and duck meat. As of 2013, the country's primary export markets for meat products are the Kingdom of Saudi Arabia, Kuwait, UAE, Qatar, Bahrain, Brunei, and Macau. The country's top poultry meat market is Japan, which imports chicken yakitori, boneless chicken breast cut, boneless leg hiraki, and whole chicken grill.

In 2013, a total of 300,000 kilograms of processed meat was exported while the volume of poultry meat exports reached 6.8 million kilograms.

The disease-free status of the country also allowed the government to facilitate the approval of the export of fresh frozen chicken meat to South Korea and the United Arab Emirates (UAE).

A Korean auditing team, together with representatives from DA, the National Meat Inspection Service (NMIS), and the Bureau of Animal Industry

(BAI), conducted an inspection of three meat establishments in the Philippines in October 2013. On November 8, 2013, the Korean Quarantine Inspection Agency (QIA) granted accreditation to Bounty Fresh Foods, Inc. and its meat establishment in Pulilan, Bulacan. The other two poultry dressing plants that were inspected, namely, Johanna's Chicken Processing Center, Inc. in Lucena City, Quezon and the Integrated Meat and Poultry Processing, Inc. in Hermosa, Bataan, submitted their compliance requirements on December 6, 2013 in line with the recommendations of the QIA audit.

Also in 2013, inspectors from the UAE Ministry of Environment and Water (MEW) audited the Philippines' certification system. The UAE team, together with NMIS, BAI, the National Commission on Muslim Filipinos (NCMF), and the Islamic Dawah Council of the Philippines (IDCP), inspected the San Miguel Foods, Inc. poultry dressing plants on July 3, 2013, namely, Johanna's Chicken Processing Center, Inc. in Lucena City, and Johanna's Chicken Processing Center, Inc. in Tiaong, Quezon.

Reassessment of these two plants for compliance/certification for food safety and Halal standards was conducted from March 29 to April 2, 2014 by a new set of auditors from MEW, the Abu Dhabi Food Control Authority, and the Emirates Authority for Standardization and Metrology.

The approval/acceptance of both meat establishments for Halal poultry was announced on April 23, 2014 during the Philippine Council for Agriculture and Fisheries (PCAF) Committee Meeting on Poultry, Livestock, and Feed Crops.



To strengthen productivity and competitiveness a roadmap for the Livestock, Poultry and Feed Crops Industry has been crafted by the Livestock Development Council. The rehabilitation and modernization of Livestock "Oksyon" Markets like the one in the photo is a vital component of the roadmap

Strengthened Support for Animal Farming and Trade

In support of the country's bid to increase exports, the DA, with NMIS, has entered into an agreement with two municipal governments for the establishment of export facilities in two key areas of the country. The first is a Php 120-million Class "AAA" Poultry Dressing Plant project under the National Livestock Program (NLP) in Bamban, Tarlac; the second is a Php 150-million Class "AAA" Slaughterhouse under the Agribusiness and Marketing Assistance Service (AMAS) in Tanauan, Batangas.

Meanwhile, to strengthen the productivity and competitiveness of the country's livestock and poultry sector, a roadmap for the Livestock, Poultry, and Feed Crops Industry has been crafted by the Livestock Development Council (LDC) with the assistance of the Mandala Agricultural Development Corporation Group.

The roadmap proposes the establishment of corn farm clusters, feed farm mills, and the formation of livestock and poultry integration partnerships, among others.

About 850,000 small corn farmers and backyard livestock and poultry raisers will benefit during the implementation of the roadmap in the first three years.

The rehabilitation and modernization of Livestock "Oksyon" Markets (LOMs) are also vital components of the roadmap.

Serving as centralized trading facilities for healthy animals, LOMs promote the fair trading of

livestock and modernized operation by using the Philippine National Standard (PNS) to grade animal quality and determine prices.

They will also employ the Livestock Transaction System (LTS), which will monitor livestock sales, while generating price estimates, body score, live-weight, species, and age for cattle and carabao.

It will also facilitate the development of a database integrating the livestock farmer-trader profile system for monitoring and traceability purposes.

This profile system is currently being developed by the Japan 2KR (Second Kennedy Round) project team in the Bureau of Animal Industry.

Bolstering Meat Safety

Government remains vigilant in ensuring that meat and meat products entering the country are safe for public consumption. Republic Act 10536 signed on May 15, 2013 strengthens this resolve as it amends Republic Act No. 9296 or the "Meat Inspection Code of the Philippines" and prescribes higher penalties and imprisonment for violations, to deter the unscrupulous from peddling "hot meat."

RA 10536 also expands the definition of "hot meat" to include "double dead" or cold slaughtered meat from diseased or dead animals, as well as illegally imported meat and meat products, both of which were not penalized under RA 9296. Nationwide public consultations were conducted in 2013 on the Implementing Rules and Regulations of RA 10536.

DA also rolled out the 2nd Harmonized Border Import Inspection Protocol in 2013 through the

Hog production grew by 2 percent in 2013 and remained the biggest contributor in the livestock sector with 83 percent of total output.



deployment of 70 newly-hired agricultural compliance officers (ACOs) for the inspection of agricultural (meat and meat products and plants) and fishery products in different accredited cold storage warehouses across Regions III, IV-A, and NCR. This initiative aims to further tighten the country's border control and to serve as a quick response to the continuing threat of smuggled goods entering Philippine shores (such as Peking duck illegally-shipped together with legally imported fishery products)

In 2013, certificates of accreditation were issued to 266 meat importers. NMIS also accredited a total of 658 meat establishments during the year of which 99 cold storage warehouses were processed in co-operation with the Bureau of Fisheries and Aquatic Resources (BFAR) and the Bureau of Plant Industry

(BPI) (Table 21)

Under the enforcement activities of the NMIS, a total of 583 surveillance and 416 strike operations in areas with reported activities of illegal slaughtering of food animals and selling of hot meat were conducted in 2013. This resulted in the confiscation of 4,853 kilograms of meat and meat products.

In 2013, NMIS also launched the trademark "NMIS-Inspected and Passed" logo which was submitted to the Intellectual Property Office for registration of the NMIS official mark for meat safety.

Further, with improved budgetary support facilities in farms, laboratories, and other support facilities were upgraded. Two major quarantine offices, the South and the North Port Harbors, were renovated to further strengthen the veterinary quarantine arm of the country.

Table 21. Number of meat establishments accredited in 2013

TYPE OF ESTABLISHMENT	NO. OF ACCREDITED ESTABLISHMENTS
Poultry Dressing Plant	116
Slaughterhouse	137
Meat Processing Plant	264
Meat Cutting Plant	42
Cold Storage Warehouse	99
TOTAL	658

Source: National Meat Inspection Service (NMIS), March 2014.

Exporting Peking Duck



The modern processing plant in El Salvador, Misamis Oriental observes the highest standards of hygiene in its operations, from dressing the ducks (top) to packing and shipping (right). Confidence in meat products processed in the country has been bolstered with the introduction in 2013 of the National Meat Inspection Service (NMIS) seal of safety (inset right photo)

MAHARLIKA Agro-Marine Ventures Corp. has taken advantage of the status of the Philippines as free from foot-and-mouth (FMD) disease and avian influenza to break into the export market.

With only a few countries remaining free from major animal diseases, the company took a chance at raising Peking ducks in Northern Mindanao (Region X) to meet the demand from Asian countries.

The company has made the province of Bukidnon its haven for raising their stocks.

According to Mr. Vicente Iao, the company's chair and chief executive officer, they import at least 3,000 day-old Peking ducklings from the United Kingdom and Canada every month and these are taken into their breeding farm and hatchery.

To assist the company in its endeavor,

the DA Veterinary Quarantine Services in Region X provides technical support, collecting blood samples and testing for avian influenza as well as inspecting and certifying the company's quarantine sites.

This enables them to raise ducks and have a continuous supply of day-old ducklings that are then transported to their growing farms in Camayan Impasug-ong in Bukidnon.

The stocks stay in the growing farm for 45 days and then harvested and brought to the new dressing plant in El Salvador, Misamis Oriental in preparation for shipping.

The company's blast frozen products include whole duck, premium breast meat, boneless leg meat, bone-in leg meat, wing fillet, and dressed Peking duck.

Secretary Proceso E. Alcala, delighted with the venture, personally visited the

company's growing farms and its dressing plant in 2013.

The company reached a milestone with the shipment of 11 MT of whole Peking duck to Japan on December 29, 2013 that helped meet the country's weekly duck meat requirement of 50 tons.

DA's Veterinary Quarantine Services provided an export permit after the National Meat Inspection Service (NMIS) inspected and certified the products.

In addition to Japan, the company is now looking at exporting to the Middle East. It is also expanding its local market and will soon start supplying the various supermarkets in the country.

Maharlika Agro-Marine Ventures Corp. has not only successfully cracked the export market, it has also opened jobs for more Filipinos as the dressing plant alone employs 300 employees per shift.

A fishpond worker arranges his harvest of milkfish in an icebox. Milkfish production rose by 3.7 percent in 2013 due to the dispersal of good quality fingerlings by the Bureau of Fisheries and Aquatic Resources, the increased stocks in Davao Del Sur, and the expansion of mariculture areas in Pangasinan.



Fisheries

The fisheries sector, which contributed an average of 19.2 percent to the gross value added in Agri-Fishery from 2010 to 2013, has begun to exhibit signs of recovery following the closed fishing seasons which commenced in 2011. From the slump of 0.3 percent in 2012, the sector posted a 1.23 percent increase in output in 2013, contributing 18.0 percent of total agricultural output. Although fisheries production contracted during the fourth quarter, this was cushioned by the positive growth in the first three quarters.

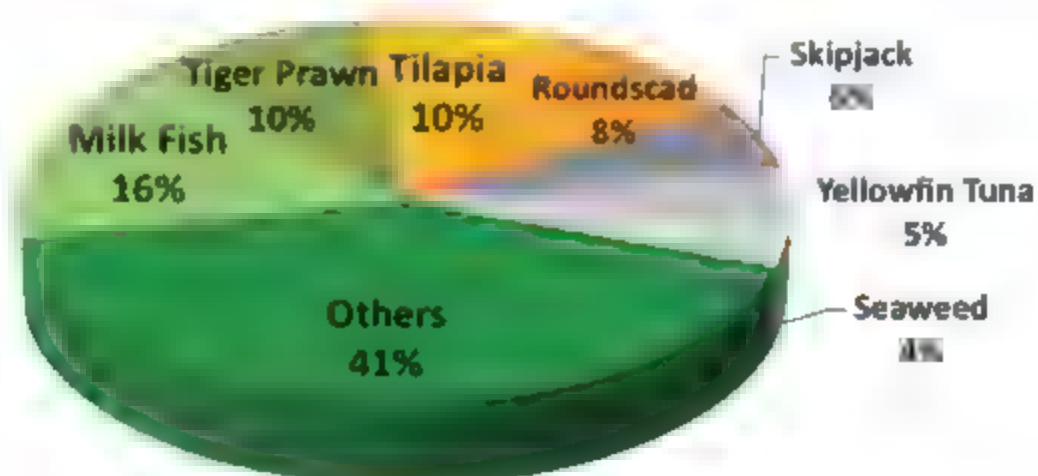
The biggest increase was noted for round scad (galunggong) which grew by 17.0 percent from 233,481 MT in 2012 to 273,234 MT in 2013. The 3.7 percent increase in milk fish, which contributed 16.3 percent to the sector's output (Figure 10), was

attributed to the dispersal of good quality fingerlings by the Bureau of Fisheries and Aquatic Resources, the increased stocks in Davao Del Sur, and the expansion of mariculture areas in Pangasinan. Other gainers from the previous year were yellowfin tuna, tilapia, tiger prawn, and skipjack (gulyasan). At current prices, the sector grossed Php 239.1 billion, a 2.8 percent increase from earnings in 2012.

FishR for Improved Delivery of Services

A National Program for Municipal Fisherfolk Registration or FishR was implemented in 2013 pursuant to the Fisheries Code or R.A. 8550, which mandates the establishment and maintenance of a

Figure 10. Percentage distribution of fisheries by species, 2013



Source: PSA-BAS, Fisheries Situationer, January-December 2013



A fisherman and his son aboard their banca attend to their fishing net. In 2013 BFAR launched the Fisherfolk Registration System, a registry of municipal fisherfolk by local government units that will help establish priorities and preferential use of aquatic resources. Around 502,317 municipal fisherfolk have already been registered in the database.

registry of municipal fisherfolk by local government units to establish priorities and preferential use of aquatic resources.

Through FishR, the government can efficiently deliver more appropriate programs for the fishery sector and protect the preferential rights of fisherfolk over the use of resources. The registry is also essential in the implementation of coastal resource management programs and projects as this will provide reliable information on the number of resource users in a particular fishing ground.

Regional launchings of the program were successfully carried out by BFAR from July to November 2013. Around 502,317 municipal fisherfolk have been registered in the database of the Fisherfolk Registration System (FRS).

Sustaining Efforts for the Continued Recovery of Fishery Resources

Government continued with the implementation of closed seasons for fishing to sustain the regeneration of fish stocks. The results of the first year of implementation in Zamboanga Peninsula (December 1, 2011 to March 1, 2012) resulted in the increase in 2012 in total sardine catch for both commercial and municipal fisheries in Zamboanga by 6.4 percent with a total production of 155,754 MT compared to 146,446 MT in 2011. A decline of 2.8 percent, however, was recorded in 2013 with 151,387 MT as a result of reduced fishing sorties due to weather disturbances and typhoons.

The hike in the population of sardines, particularly "tamban" or Indian sardine was likewise felt in nearby Regions X and XI. Data from PSA BAS indicate a rising trend for sardine production in Region X, starting from 18,265 MT in 2011 to 20,562 MT

in 2012, and 22,792 MT in 2013. Davao Region also registered an increase of 70 percent in sardine production from 1,762 MT in 2012 to 2,999 MT in 2013. This is considered a possible spill-over effect for the previous closed season in Zamboanga.

Amid ongoing tensions between government troops and the Moro National Liberation Front (MNLF) fighters in Zamboanga City in 2013, BFAR pursued the implementation of the third sardine closed season on December 1, 2013. This was lifted three months later on March 1, 2014. Aside from isolated incidents of commercial fishing vessels sighted in the prohibited areas, there was strong compliance by the stakeholders. The National Fisheries and Aquatic Resources Management Council (NFA-RMC) Medium-Scale Commercial Fisheries stated that the industry is yet to see the whole impact of this third closed season as it was only recently lifted. Nevertheless, fisherfolk and sardine operations are clamoring for the continued implementation of the closed season every year.

Meanwhile, BFAR is currently conducting scientific research and assessment in the waters off the coast of Palawan as basis for the establishment of a closed season for round scad, commonly known as galunggong.

In addition, BFAR's research arm, the National Fisheries Research and Development Institute (NFRDI), has partnered with the Department of Communication of Ateneo De Zamboanga University in its bid to heighten conservation awareness under the Sulu-Celebes Sea Sustainable Fisheries Development Project. The project recently launched *Lana Sardinas*, a comic book which popularizes sardine fisheries management.

The waters of Zamboanga are not the only areas where sardine closure has been implemented. BFAR

Fisherfolk in Zambales harvest seaweeds. The seaweed industry remains a priority area and BFAR actively promotes the establishment of seaweed nurseries, the operation of seaweed tissue culture laboratories and the conduct of various research projects to support its growth and development.



has also reinforced Fisheries Administrative Order No. 167, series of 1989, which established a sardine closed season in the Visayas Sea and its surrounding waters from November 15 to February 15 every year

Support for Fisherfolk Livelihood

One of the major programs of BFAR involves the restoration of the country's mangrove forests, a crucial step toward mitigating the adverse effects of climate change in archipelagic countries. In December 2012, it launched the Philippine National Aquasilviculture Program (PNAP), a joint undertaking with the Commission on Higher Education (CHED)

The program, which covers 15 coastal regions of the country, promotes development of sustainable fisheries, provision of fisheries livelihood, food security, and poverty alleviation.

BFAR and the participating State Universities and Colleges (SUCs) under CHED are supported by the DENR and its various Environment and Natural Resource Offices and the concerned provinces and municipalities.

The initial strategy of the program is resource rehabilitation and protection through the planting and nurturing of 100 million mangrove trees from 2011 to 2016.

Participating fisherfolk are encouraged to collect, plant, and nurture mangrove propagules with an incentive of Php 1.50 for every propagule collected, Php 2.00 for every propagule planted, and Php 2.50 for every fully-grown plant. Since 2011, some 52,000,000 propagules have been planted benefiting some 20,500 fisherfolk.

Once the natural environment is rehabilitated, fisherfolk stand to gain additional income from the aquasilviculture program, a livelihood mechanism

through fish production without destroying the mangrove vegetation. Under this component, 87 demo sites were established in 2013 benefiting 640 fisherfolk at a cost of Php 8.9 million

Another component of the program is the establishment of community-based hatcheries (CBH) for spawning gravid fish or crustaceans, such as blue crab caught in the wild to save its offspring. The hatchery will contribute to stock enhancement and eventually become a source of fingerlings and seedstock for aquasilviculture and other aquaculture projects.

The participating 64 SUCs take the lead in the operations and maintenance of these hatcheries. Based on the project guidelines, each SUC must construct or improve one CBH. Twenty-one CBHs are now operational while 37 are under construction for completion by the first semester of 2014.

Mariculture Parks — To support aquaculture in the country, BFAR assisted in the establishment of mariculture parks, providing the initial investment for mooring devices and techno-demo cages. Fisherfolk cooperatives and private sectors are then encouraged to participate and invest in the culture and production of high-value species using marine cages. A total of 65 mariculture parks are presently maintained and one MP was established in 2013 in Roxas, Palawan.

Fish cages for livelihood were also provided to fisherfolk beneficiaries to engage them in mariculture development. Reducing the cost associated with setting up fish cages seeks to encourage them to shift from fish-hunting to farming. The fish cage for livelihood project includes provision of cage structure, anchors and buoys, 7,000 pieces of fingerlings for initial stock, and training courses on aquaculture and fish cage operation and maintenance, as well as facilitation of access of beneficiaries to feed suppliers. A total

of 131 cages have been provided, higher than the target 96, benefitting a total of 524 fisherfolk.

Seaweeds industry — The country's seaweeds industry continues to be a priority area. In 2011, the Philippines ranked as the world's third-largest producer of aquatic plants (including seaweeds) with a total production of 1.8 million MT or nearly 9 percent of the total world production of 21.0 million MT.

From 2010 to 2013, seaweeds accounted for almost 69 percent of the total volume of the country's aquaculture production output. Despite this, the seaweeds industry is faced with challenges such as declining farm productivity, poor quality of seedlings, lack of post-harvest facilities, and proliferation of diseases.

BFAR continues to carry out projects and activities to address these problems including the following: establishment of seaweed nurseries, operation of seaweed tissue culture laboratories, and operation of existing seaweed processing plants. Table 22 shows the accomplishments of BFAR in this regard.

Other strategies on seaweed development include: 1) expansion of seaweed production in non-traditional areas (specifically in the Eastern Seaboard), 2) improving seaweed health management, and 3) intensive research focusing on the development and utilization of seaweed resources.

National Payao Program — To increase fishing efficiency, BFAR is implementing the National Payao Program which aims to install payao units nationwide. In 2013, 1,770 units were deployed exceeding the target of 1,110. Payaos increase fishing efficiency by reducing the time and cost of searching for fish and also act as support mechanism for the development of new fishing grounds in the high seas such as the Benham Rise.

Fish Ports — To address the high incidence of poverty in the fishery sector, particularly among municipal fisherfolk, BFAR with the support of the Philippine Fish Ports Development Authority (PFDA) implemented the Fish Ports Development Program. This aims to establish new fish ports and rehabilitate some of those existing to increase the

value of fishery production and trigger economic activities in strategically-located areas.

Twenty three municipal fish ports and/or ice plant and cold storages were programmed for 2013. One municipal fish port was completed in Baco and a fish landing was constructed in Pola both in Oriental Mindoro. Likewise, the first phase of the rehabilitation of the Sto. Tomas Municipal Fish Port in La Union was completed. The rest are in various stages of implementation.

A Pledge Towards Responsible Fishing

The Philippines remains the only nation allowed to go fishing in the tuna-rich High Seas Pocket 1 (HSP1) of the Western Pacific Ocean for four more years after the Tuna Commission ruled that the Philippines was adhering to responsible fishing practices.

The ruling was made during the 10th Regular Session of the Commission for the Conservation and Management of Highly-Migratory Fish Stocks during the Western and Central Pacific Ocean Commission Convention held in Australia in December 2013.

HSP1 was opened two years ago following a two-year fishing ban in all four pockets due to the growing alarm over declining tuna catches.

The country is also the first in Southeast Asia to establish a legal framework to fight, prevent, and eliminate illegal, unreported, and unregulated (IUU) fishing in the Philippines' exclusive economic zone with the signing on December 6, 2013 of Executive Order No. 154 entitled, "Adopting a National Plan of Action to Prevent, Deter, and Eliminate, Illegal, Unreported and Unregulated Fishing and for Other Purposes."

This National Plan of Action was crafted following the joint mobile registration and licensing of commercial fishing vessels in remote parts of the country, which began in August 2013. The teams who undertook this consisted of personnel from BFAR, the Maritime Industry Authority, the National Telecommunications Commission, and the Philippine Coast Guard. A total of 195 vessels have been registered and licensed in Regions I, III, IV-A, IV-B, VIII, X, and XI.

Table 22. Activities under the Seaweed Development Program of the BFAR, 2013

ACTIVITY	Target (no.)	Delivered (no.)	Accomplished (%)
Establishment of Seaweed Nurseries	80	71	88.75
Operation / maintenance of Seaweed Tissue Culture Laboratories	11	14	127.27
Operation of existing seaweed processing plant	1	2	200.00
Provision of seaweed seedlings as input assistance	810,300 kg	976,448 kg	120.50
Distribution of seaweed farm implements	16,713 sets	23,869 sets	142.82

Source: Bureau of Fisheries and Aquatic Resources (BFAR)

The 3rd International Symposium on Vermitechnologies was held on November 2013 at the Kahanam Farms in Ibaan, Batangas. Photo shows the participants touring the vermicomposting beds.



Organic Agriculture

During the year, the National Organic Agriculture Program (NOAP) continued to build on the gains it has so far achieved as a mechanism for slowly but steadily promoting climate resiliency, supporting food sufficiency, and enhancing awareness of environmental protection and regeneration.

By the end of 2013, the program had assisted 76,500 farmer-beneficiaries in the practice of organic farming in an estimated 40,000 hectares.

Sustained program implementation is expected to increase the area under organic farming to 52,000 hectares in 2014 and 67,600 hectares in 2015 and benefit an estimated 93,000 farmers and at least 16,100 organic producers.

Meanwhile, the documented volume of organic production stood at around 13,000 MT, which contributed substantially to the total agricultural output of the country.

The NOAP distributed inputs to a 106 groups of organic agriculture practitioners. Its support for extension services resulted in the conduct of 93 farmer field schools (FFS), 19 farmer field days, and 469 training courses, with about 287,932 pieces of Information, Education, and Communication (IEC) materials distributed to capacitate 2,287 farmers. At the same time, a total of 589 technology demonstrations have been either established or maintained across the country.

In line with the thrust to promote organic agriculture, BPI became the first government agency to have its own certified organic farm-in-transition in June 2013. This is in 1.28 hectares of the National Crop Research and Development Center (NCRDC) of its station in Los Banos, Laguna.

Moreover, 34 hectares of BPI farms in five locations are devoted to organic seed production of various fruits and vegetables and it distributed 6,000 kilograms of organic seeds and 50,000 pieces of organic planting materials for further multiplication to 235 cooperators and farmers.

Across the nation

With the help of DA-RFO II, the province of Batanes was declared an Organic Agriculture Zone in April 2013 producing organic garlic, rice and livestock.

In Region V, 100 farmers with a production area of 70 hectares started the conversion to organic farming and 10 farmer organizations availed of 10 sets of composting facilities.

In Region III, market-matching activities, project-funding, and establishment of facilities (e.g., community-based material recovery facilities, techno-demo farms, trading posts) contributed to the increase in the number of adopters and stakeholders and the organic farm area increased from 1,969 hectares to more than 10,000 hectares with more than 600 farmers engaged in organic farming.

Promotions

Meanwhile, local and international exhibits showcased organic agriculture products and posted outstanding accomplishments.

For the local market, the Agri-Aqua Network International, Inc. (AANI) held the Festival Exhibit on September 27-29, 2013 at the Quezon City Memorial Circle. This was followed by the 1st Philippine Natural and Organic Products Expo that was held along with the 10th National Organic Agriculture Congress on October 16-19, 2013 at the Philippine International Cultural Center in Pasay City.

In the international market, the Philippines participated in five exhibits: 1) the BLIMP-EAGA Agribusiness Cluster meeting in Palawan; 2) the Middle East Natural and Organic Product Expo (MENOPE) in Dubai, UAE; 3) an exhibit in Korea; 4) the SIAL Middle East Food Exhibition in Abu Dhabi, UAE; and 5) the BioFach 2013 in Japan.

These generated local sales of about Php 12.7 million and a series of exports amounting to about US\$ 42.5 million.

Commercial production of ube



DA provides farmers with sufficient tissue culture plantlets of ube together with training on their handling and management

YAM or ube, especially the purple variety, is the most expensive root crop today due to the high demand in the food processing industry as well as its reputed therapeutic value. However, commercial production of this commodity is limited by problems. These include the low availability of quality planting materials as well as lack of farmers' awareness on how to care for and manage tissue culture yam plantlets.

Records show that overall annual demand for ube is 49,000 MT but in 2011 only 17,844 MT was produced in some 3,000 hectares of area.

To address this situation, DA and its Regional Field Offices (RFO) partnered with the University of the Philippines - Los Baños (UPLB) in a project that would provide farmers with a sufficient quantity of tissue culture yam plantlets as well as training courses on their handling and management and overall cultural management for yam production.

One beneficiary of this project is the Kapitbahayan Cooperative of Gawad Kalunga (GK) San Antonio in Catiguan, Toril, Davao City.

The cooperative received a grant of 45,000 plantlets from the Tissue Culture

Yam Plantlets Production project of the Visayas State University in Baybay, Leyte funded by the Bureau of Agricultural Research and the High-Value Crops Development Program (HVCDP).

The cooperative, in turn, would shoulder the cost of training its members-beneficiaries in the proper handling and management of the plantlets, from the culture bottle to the field, as well as best practices in the care and management of yam production.

An ice cream company, Selecta, agreed to bankroll the other costs of yam production with the proviso that they would have the first option to buy the harvest after the farmers set aside a portion of the produce for use as material for the next planting season.

Recently, the first batch of 3,000 hills of yam planted with tissue culture plantlets was harvested, with a total yield of 3,600 kilograms.

Although it was the first time that the cooperative used tissue culture plantlets, they had been growing yams using locally available planting materials since 2011 through the Bayan-Anihan Project between DA and Gawad Kalunga.

Phase one of the said project aimed to provide food for the table of about 30 families in GK Pueblo Antonio; the second phase aims for commercial yam production.

In 2012, GK Pueblo Antonio and Selecta decided to expand the project to involve 30 more beneficiaries. However, due to limited planting materials, they were only able to plant 20,000 hills that yielded about 30 MT of purple ube.

In 2013, GK Pueblo Antonio received additional support from the HVCDP of Regional Field Office XI in the form of a post-harvest facility worth Php 1 million. This will serve as a place for sorting and temporary storage/warehouse for harvested ube, as well as for value-adding activities for other high-value products that GK community will produce in the future.

All told, the enthusiasm of the farmers-members of the cooperative, the strong support of Regional Field Office XI as well as the Davao City Agriculture Office, together with the ready market provided by the partner commercial processor, have laid the groundwork for the continued healthy production of this highly lucrative and delicious root crop in the next planting seasons.

DA provided Indonesia with a list of farms, traders and exporters certified by Philippine Good Agricultural Practices and shallot exports to Indonesia resumed. Photo shows a field of onions planted by a mechanical seeder



Strengthened regulatory capacity

DA worked on its commitment to strengthen regulation services in light of stricter rules adopted in various destinations. The following are some of its undertakings to comply with international standards and the regulations of trading partners

- In 2013, the Philippine Fiber Industry Development Authority assisted in getting 211 hectares of abaca farms in Catanduanes certified for sustainable agriculture by Rainforest Alliance benefiting 36 farmers. The certification is a requirement of Unilever for tea bag producers of Lipton Tea. The tea bag producers, in turn, required local traders and processors to source their abaca fibers from farms certified by Rainforest Alliance

- For shallots, the Department provided Indonesia with a list of farms, traders and exporters certified by Philippine Good Agricultural Practices. This resulted in the reactivation of shallot export to Indonesia

- For corn silage, BPI and DA-RFO I worked on compliance with the Sanitary and Phytosanitary Standards (SPS) requirements of South Korea, such as Pest Risk Assessment

- With a rubber testing laboratory, DA RFO IX can now detect adulterated rubber latex

- BPI and the DA-RFO X assisted in the

regulatory negotiations and compliance with SPS requirements for Highland Banana Cavendish farms in Bukidnon.

- DA-RFO XIII, through its Plant Quarantine Services, is closely monitoring and inspecting all imported palm planting materials coming from Malaysia to prevent the entry of invasive alien species of plant pests and diseases.

- In response to a request by San Miguel Corporation and Bounty Fresh, the BAI and NMIS negotiated with South Korean counterparts to conduct an import risk assessment on chicken meat. The country now exports chicken meat products to South Korea.

- BFAR facilitated compliance with the traceability system requirement of the European Union for tuna by crafting a joint Memorandum Circular with the NTC, PCG, and MARINA for mandatory registration of commercial fishing vessels. This effort has resulted in the registration of 139 commercial fishing vessels nationwide

- Other trade regulatory-related activities have also been initiated for the export of organic banana (bongolan), organic garlic, honey dew melon, mango, as well as for the sustained export of muscovado.

Intensified market development efforts

The strong partnership of the government with farmers and other stakeholders has helped to achieve agricultural milestones in 2013 that signal the increasing competitiveness of the country's crop raisers.

For instance, DA prioritized the development of two new export market commodities — premium and organic rice and yellow granex.

With the strong collaboration of the National Rice Program, AMAS, regional field offices, regulatory agencies, producers, and exporters, the country was able to export 300 MT of fancy rice to different countries in 2013.

With HVCDP support for the project of the National Onion Growers' Cooperative Marketing Association and the Bureau of Agricultural Research to increase the production of yellow onion and export it, a trial shipment of 20 MT of yellow granex from Nueva Ecija was sent to Japan in March 2013 and found acceptable by the Japanese importer.

The government also worked hard to expand the market for Philippine bananas. Eight years after requesting market access for this produce, the U.S. Department of Agriculture (USDA) finally signed the Comprehensive Work Plan for the Philippine export of bananas to the Continental U.S. in June 2013.

With this, the Philippines became the first Asian country to export bananas to the mainland U.S. with the initial commercial shipment of 486 cartons or 6.6 MT of highland Cavendish bananas on September 9, 2013 through the BPI.

These were sourced from the Dole farm in Casisang, Malaybalay, Bukidnon and exported under the Sweetio brand of Dole Philippines as part of its 3,000 MT-target volume of exportation to the Continental U.S. for the first year (September 2013-September 2014).

Upon arrival in San Diego, California, these were delivered to large retailers including the giant supermarket chain Albertson's and specialty stores such as Trader Joe's and Whole Foods.

The country's farmers also reached a first in 2013 with the exportation of an initial 20 MT of achuete to Vietnam in July 2013. This was produced by small and indigenous farming communities in the Kibalang Marahan District of Davao City, consolidated by Lingkod Saka, Inc., and exported through the Vegetable Importers, Exporters, and Vendors Association (VIEVA).

In addition, the compliance with import requirements such as the issuance of PhilGAP certificates to exporters has enabled the Philippines to export a total of 4,588 MT of shallots to Indonesia, Korea, Malaysia, Singapore, Spain, and Thailand.

Meanwhile, a Specific Commodity Understand-

ing (SCU) for the export to Australia of fresh mango fruit from Guimaras Island, Samal Island, and the province of Davao Del Sur was officially signed on July 9, 2013. The signing was held during the Philippines-Australia Agriculture Forum at Canberra, Australia.

Initial commercial export of mango to Australia from Davao Del Sur and Samal Island began in June 2013. Total volume of fresh mangoes exported to Australia in 2013 reached 6 MT valued at US\$ 18,500.

The Agribusiness and Marketing Assistance Service also sustained its efforts to increase the marketability of the country's agricultural and fishery products. It coordinated with the Department of Trade and Industry and the private sector for the country's participation in 31 international trade shows, fairs, exhibits, and expositions (four of which were held in the Philippines).

The Php 50 million invested by the country in these international shows generated total sales amounting to almost US\$ 300 million or more than Php 12 billion. Participation in the local trade shows generated sales of almost Php 1 million.

These events also served as opportunities to link suppliers and buyers in a pro-active, mutually-beneficial, cost-effective, and sustainable manner.

Agri-fishery produce that were matched/linked in 2013 include gabi leaves, ube, rice (fancy premium and organic), yellow granex onion, banana (saba and cardaba), peanuts, ginger, garlic, and dried fish, among others, and were valued at Php 150 million.

Meanwhile, 17 Agri-Pinoy Trading Center (APTC) facilities that were programmed from 2011 to 2013 are in various stages of development in different parts of the country: three in Pangasinan, two in Nueva Vizcaya, and one each in Batangas, Benguet, Bohol, Camarines Norte, Cebu, Davao, Ilocos Sur, Isabela, Nueva Ecija, Quezon, Surigao Del Norte, and Zamboanga Del Sur.

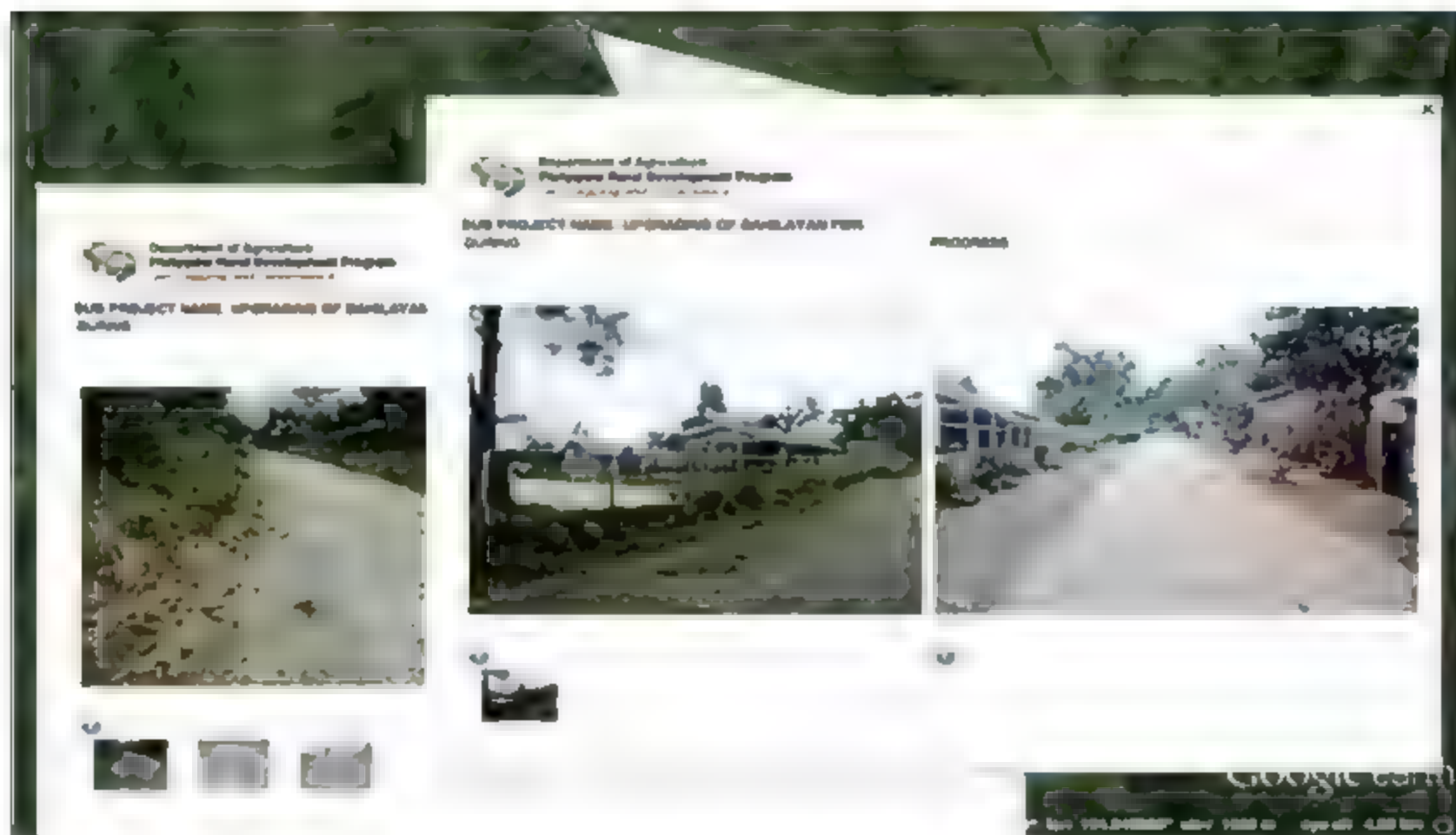
These centers have different modalities depending on the agricultural products predominantly produced in the area.

Five APTCs are for livestock, four for lowland vegetables, two for corn products, one each for highland vegetables and organic agri-fishery products, while four are designed as multi-commodity trading centers.

The largest of these, the Benguet APTC, is currently being set up in a 4-hectare lot in Strawberry Fields of the Benguet State University Compound in La Trinidad, Benguet and will cater to highland vegetables. Expected to be completed by end of 2014, it will benefit 5,000 farmer families and create around 3,000 jobs.

The MRDP experience: Governance reforms through IT

A screen capture on a computer monitor shows the status of a farm to market road. Geotagging allows the visual monitoring of projects in conflict-ridden and remote areas without having to conduct actual on-site validation, saving manpower resources, time, and effort.



To achieve greater transparency and accountability in rural infrastructure projects, geotagging continues to be promoted in agri-fishery investments, enabling the efficient and convenient monitoring of projects.

The value of geotagging as an innovative approach in overseeing government projects is nowhere more emphasized than in the Mindanao Rural Development Program (MRDP).

Geotagging of MRDP projects was initiated in 2011. Since then, the tool has aided in efficient project supervision by applying global positioning system (GPS) technology to map out subprojects, thus enabling citizens and the local government — from the barangay to provincial units — to monitor their progress and implementation.

The tool is especially useful in conflict-ridden and remote areas in Mindanao since the progress of implementation of various development projects can be visually monitored without having to conduct actual on-site validation, saving manpower resources, time, and effort.

The transparency afforded by the technology has also improved the procurement and bidding processes since information on specific subprojects is made readily accessible, thereby encouraging competitive bidding.

Fraudulent activities are also curtailed as the tool aids in detecting fabricated project designs and plans that do not correspond to actual field conditions and result in irregularities in information and reports.

Data geotagged under the MRDP are embedded in Google Earth. These consist of photographs, accompanied by geographical coordinates, accurate dates, elevation, terrain, and estimated land area and distance covered by the subproject, among others.

MRDP has geotagged 1,980 subprojects under the community fund for agricultural development, 475 rural infrastructure subprojects, and 30 sites covered by the natural resource management component.

E-modules for other government agencies such as the DSWD and DENR have also been developed so they can adapt geotagging in their projects. These — coupled with the user-friendly system designed by MRDP, open source software, and affordable hardware — make it easy for LGUs to utilize the application.

The geotagging innovation by MRDP, recognized as the first among government agencies in the Philippines and one of the pioneers in the region, received the Good Practice Award as an efficient transparency tool from National Economic Development Authority. It also garnered international recognition as the World Bank cited the project as a "web-based technology (that) promotes more efficient management of community-driven projects in remote and conflict-affected areas in Mindanao."

In April 2014, it was bestowed the Science of Delivery Award in the global Procurement for Complex Situation Challenge, where MRDP's case story on geotagging was cited.

DA's platform for reform: Philippine Rural Development Project

The Philippine Rural Development Project (PRDP) was approved by the National Economic Development Authority (NEDA) Board during its meeting on June 26, 2013, a little more than a year from its conceptualization and preparation. The PRDP is a six-year program (2014-2019) aimed at developing a more inclusive, market-oriented, and climate-resilient Agri-Fishery sector.

As an enhanced and expanded version of the MRDP, it will focus on priority commodity value chains agreed upon by DA and partner provincial LGUs. Its four components — National and Local Planning, Infrastructure Development, Enterprise Development, and Institutional Development — are interconnected to achieve the desired results of higher incomes and productivity more effectively.

While Local Planning rationalizes and specifies all eligible investments through the value chain approach embodied in the Provincial Commodity Investment Plans (PCIPs), the Infrastructure Development and Enterprise Development Components refer to actual on-the-ground investments that comprise 92 percent of the Php 27.5 billion PRDP budget. The Infrastructure Development Component deals with the construction and rehabilitation of rural infrastructures supportive of the commodity value chain while the Enterprise Development Component will help rural farming and fishing communities operate agro-enterprises along this chain. The Institutional Development Component would ensure that the processes of the three components are mainstreamed into the DA system and adopted internally across programs come mid-term.

Pre-Implementation

In 2013, the DA put in place the institutional mechanisms and resources for the preparatory activities through the preparation of the operations manuals and guidelines, the creation of the program implementing units, and conduct of capacity building ac-

tivities on program tools and processes at all levels.

Secretary Alcala issued Special Order No. 68 dated 22 January 2013 designating the key officials and staff of the National Program Coordination Office (NPCO) who will manage the program start-up activities and ensure full buy-in of the program by key partners and stakeholders.

To more effectively undertake program activities in the regions, four Program Support Offices (PSOs) were created: Luzon A, Luzon B, Visayas, and Mindanao. The PSOs are tasked to oversee cluster-wide program operations and assist the Regional Program Coordination Offices (RPCOs), which are lodged at the DA RFOs. A Provincial Program Management and Implementing Unit (PPMIU) will be established in each of the participating provincial LGUs as the counterpart team with the primary role of preparing all program documents for review and approval, and directly overseeing project implementation on the ground within their area.

Infrastructure Development

In terms of the Infrastructure Development Component, 83 subprojects amounting to Php 2.35 billion are all located in the Mindanao cluster. These represent subprojects from the MRDP2 that qualify in PRDP. Twenty-six of these subprojects are at procurement stage while the remaining 57 are in the subproject development phase.

Pilot Provinces

Advanced in subproject preparation are Oriental Mindoro (fresh calamansi), Albay (coco geonets), Isabela (dairy), Negros Occidental (muscovado), and Davao Del Norte (cacao). All other regions have at least one province with a priority commodity and an established PPMIU that will not only prepare their respective PCIPs but also generate proposals and the subsequent subprojects in 2014.



Climate-resilient Agri-Fishery technology and infrastructure

Agromet Stations

Under a U.S. Department of Agriculture program for climate change adaptation and development of local early warning systems, the Bureau of Soil and Water Management undertook a project to establish agro-meteorological stations in highly vulnerable agricultural areas.

Its objective is to lessen the vulnerability of the agriculture sector to the impacts of natural disasters and climate change through the timely collection and generation of accurate agro-meteorological data through automated weather stations (AWS).

The project also supports the partnership with PAGASA, the agency of the Department of Science and Technology (DOST) in charge of gathering meteorological data, to enhance the BWSM's collection

and processing of weather data to improve crop management.

As of March 13, 2014, 99 AWS have been installed of the target 153. The agromet data generated by AWS can serve as basis in the development of localized threshold values for the occurrence of disasters like floods, as well as pest and disease outbreaks.

For instance, when relative humidity reaches 70-80 percent, bacterial leaf blight (BLB) will likely occur in a particular rice variety in a particular area, or, at 10 mm/ hour rainfall intensity, river X will start to rise above the normal and flood the nearby barangays. Agromet stations can also aid in providing data (specifically rainfall data) to justify the delay in the construction of infrastructures.

Farm-to-Market Roads

Further, the DA, in coordination with the Department of Public Works and Highways (DPWH), is continuously constructing and rehabilitating Farm-to-Market Roads (FMRs) through concreting to facilitate the efficient exchange and transport of agricultural products.

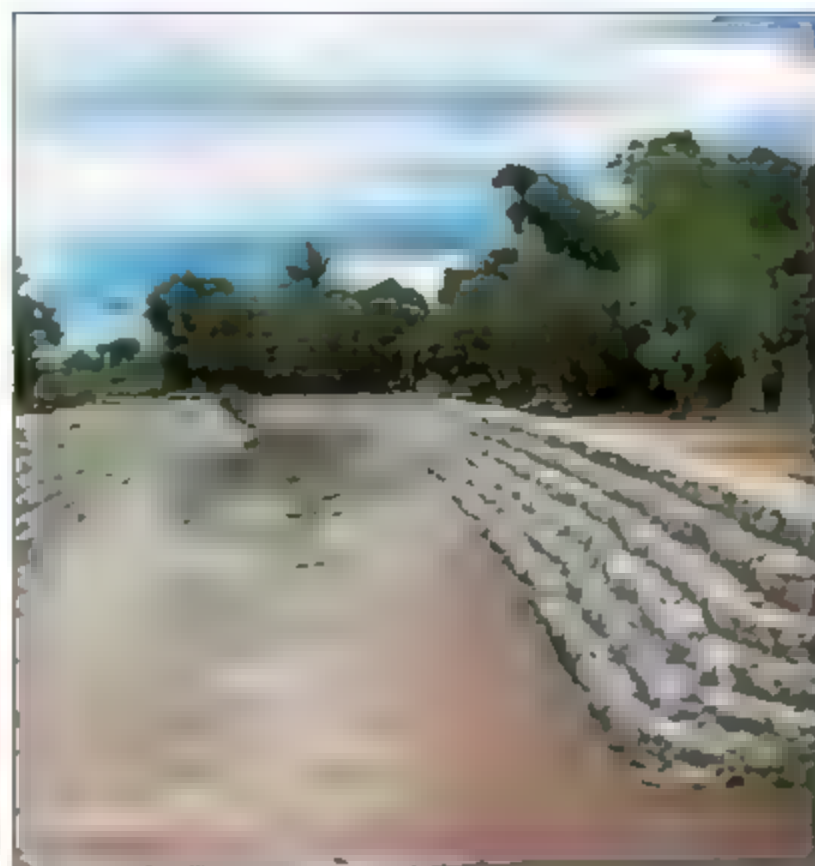
Under the DA's regular program, a total of 978 kilometers of FMRs were completed in 2013 consisting

of projects funded from 2010 to 2013 (Table 23). Of these, 179 kilometers have a permanent surface and proper drainage. Moreover, 422 kilometers of FMRs funded under special projects were completed within the year under Foreign-Assisted Projects (FAPs) and Locally-Funded Projects (LFPs). Altogether, from 2011 to 2013, total FMRs completed reached 2,361 kilometers.

Table 23. Completed Farm-to-Market Roads in 2013

PROJECT	COMPLETED (km)
FMR Regular Program	978.10
Foreign-Assisted Projects (FAPs)	382.53
InfRES	12.77
MRDP 2	316.33
CHARMP 2	51.43
SELAP	2.00
Locally-Funded Projects (LFPs)	39.37
SOCSEKARGEN ADP	7.28
DIDP	17.27
CASECNAN SMP	14.82

Source: DA-Farm-to-Market Road Development Program, March 2014,
DA-Special Projects Coordination and Management Assistance Division, April 2014.



As part of the DA's program to mitigate the adverse effects of climate change on crop production it is undertaking the concrete lining of both main canals (right photo) and lateral canals (left photo) in 2013. 7,906 kilometers of canals were lined with concrete

Irrigation Canals

Concrete lining of irrigation canals is also one of the physical interventions under climate change adaptation and mitigation. This has been integrated into the implementation of line projects, Repair Rehabilitation of Existing Irrigation System (RREIS), extension projects, and Small Irrigation Projects (SIPs).

Currently, there are a total of 29,526 kilometers of main and lateral canals in existing NIS and CIS (Table 24). These are broken down into 8,662 kilometers of main canals and 20,864 kilometers of later-

al canals. As of December 2013, 7,906 kilometers of canals have already been lined with concrete, while 21,620 kilometers remain unlined

For 2013, the target length of canal lining under all fund sources was 650 kilometers. These are 100 percent accomplished, broken down into 153 kilometers for NIS and 497 kilometers for CIS (Table 25). The accomplishment in NIS is further broken down into 46 kilometers of main canals and 107 kilometers of lateral canals. Targets are 700 kilometers for 2014, 800 kilometers in 2015 and 750 kilometers in 2016.

Table 24. Total Length of Canals (concrete lined and unlined), as of December 31, 2013

SYSTEM	Main Canal (km)	Lateral Canal (km)	TOTAL
National Irrigation Systems (NIS)			
Unlined Canals	2,839	8,180	11,019
Concrete Lined	1,382	2,616	3,998
Communal Irrigation Systems (CIS)			
Unlined Canals	3,553	7,048	10,601
Concrete Lined	888	3,020	3,908
TOTAL	8,662	20,864	29,526

Source: National Irrigation Administration, April 2014.

Table 25. Length of Concrete Lined Canal under CY 2013, as of December 31, 2013

SYSTEM	Main Canal (km)	Lateral Canal (km)	TOTAL
NIS	46	107	153
CIS	99	398	497
TOTAL	145	505	650

Source: National Irrigation Administration, April 2014.



Photo shows Green Super Rice lines being tested together with farmers varieties.

Stress-tolerant Rice Varieties

Meanwhile, tests on stress-tolerant rice varieties were also conducted under the AMICAF project of the FAO in collaboration with the DA, which include drought-tolerant varieties in response to the effects of the El Niño phenomenon on crop production.

Results from different regions for the 2013 wet season indicate the climate-resilient line, Green Super Rice (GSR), as tolerant not only for a single-stress but for a combination of different stresses, whether these are located in favorable or unfavorable environments (Table 26). GSRs 11 and 8 proved to be outstanding out of the six lines selected for national tests with combination of climate-induced environmental stresses.

In general, GSR yielded 0.6 MT/hectare more than check varieties across 35 sites, equal to a 9 percent advantage. Under favorable rainfed lowland conditions, the best GSR lines have a potential yield of 8-10 MT/hectare. Top yielders for drought areas are GSRs 11, 8, 1, and 5 as these exemplified yield increases by 0.4-0.9 MT/hectare over different farmers' varieties. On the other hand, some GSR lines were preferred in several sites despite lower yield due to aroma (GSRs 5A and 12) and resistance to pests (GSRs 2 and 5A)

Saline-tolerant rice varieties/lines were also tested for crop production areas near the sea, as salt water intrusion caused by extreme events such as

Table 26. Yields of climate-resilient lines over check varieties in 35 drought-prone rainfed sites in the Philippines, 2013 wet season

GSR LINES	Maturity, Days	Ave. Yield, MT/ha	Difference over check varieties	% Advantage over check varieties	Maximum yield MT/ha
GSR 1	102-110	4.58	0.43	10	8.6
GSR 2	100-112	3.85	-0.3	-7	4.3
GSR 5	108-110	4.56	0.4	10	7.5
GSR 5A	102-115	4.38	0.23	6	6.5
GSR 8	102-105	4.94	0.79	19	9.9
GSR 11	95-112	5.04	0.89	21	10.3
GSR 12	102-115	4.39	0.24	6	8.4
GSR average		4.72	0.57	9	
Check average		4.15			

Source: FAO-AMICAF, April 2014

storm surges result in saline water reaching irrigation canals. GSRs generally outyielded the seven different check/ farmer varieties across 10 sites in Regions I, II, V, and VII by 0.34 MT/hectare, or a 17 percent yield advantage (Table 27). Under saline rainfed lowland, GSRs have a potential yield of 4-6 MT/hectare, while top yielders for saline-prone areas are GSRs 11, 2, 8, and 12. Said lines have yield potentials that are at least 30 percent higher than check/farmers' varieties.

Excessive rainfall induced by climate change can

also cause rivers, lakes, and other catchment basins to swell and invade crop production areas in low-lying communities, resulting in flooding and submergence that can last several weeks or even months in rice areas normally situated downstream or next to sources of irrigation water. Planting of flooding-tolerant rice varieties that can survive up to one month of flooding is one of the strategies being developed to address this. Table 28 shows that new rice lines Rc 18 Sub-1, and GSRs 8, 5, and 5A performed acceptably

Table 27. Results of saline-resistant varietal testing for climate change-related stresses in 10 sites in the Philippines, 2013 wet season

GSR LINES	Maturity, Days	Ave. Yield, MT/Ha	Difference over check varieties	% Advantage over check varieties	Maximum yield MT/Ha
GSR 1	102-120	2.84	0.04	1.5	4.2
GSR 2	110-112	3.80	1.01	36	3.8
GSR 5	108-112	2.80	0.01	0.3	5.3
GSR 5A	102-121	2.62	-0.18	-6.4	4.6
GSR 8	102-118	3.52	0.72	26	6
GSR 11	111-121	4.25	1.46	52	6.2
GSR 12	102-121	3.06	0.27	10	5.5
GSR ave.		3.13	0.34	17	
Check ave.		2.79			

Source: FAO-AMICAF, April 2014

Table 28. Results of submergence-resistant varietal testing for climate change-related stresses in Bicol and Caraga regions, 2013

LINES/VARIETIES	Nabua, Samarang Sur	Mainit, Surigao Del Norte March-June 2013		Mainit, Surigao Del Norte July-December 2013	
		(Night) submerged	(Night) submerged	(Night) submerged	(Night) submerged
GSR 1	3.4*	4.36	3.71	3.16	3.01
GSR5	5.1				3.16
GSR 5A	4.6	4.3	4.11	3.08	
GSR 8	6	4.26	4.05	4.62	3.16
GSR 11		4.63	3.71	4.44	3.22
R 82858-B-B-1 (W142)	3.0*				
PSB Rc18(sub-1)	7.5	3.22	2.61	4.27	
NSIC Rc194	3.0*	3.23	2.58		
Farmer's Variety(PSB Rc18)	3.31	1.5	2.42	2.46	

Note: At the time of testing, the plots were not flooded and some plots even suffered from drought at the vegetative to reproductive stage.

*With sheath blight and tungro infection.

Source: FAO-AMICAF, April 2014

Strengthened Collaboration with Stakeholders



A harvest rice festival in Region XI featured the distribution of modern farming equipment.

The National Agricultural and Fishery Council (NAFC) provides the mechanism for the involvement of the private sector in the development of policy recommendations.

In 2013, its National Sectoral Committees helped craft Republic Act 10601 or the Agriculture and Fisheries Mechanization Law, which seeks to promote the use of modern and cost-effective machinery in Agri-Fishery. Most of the provisions of the law that took effect on June 28, 2013 were inputs from private sector partners.

The NAFC also facilitated the adoption of the second border inspection of imported fish and plant products to help protect the country from the entry of plant and animal diseases, similar to the current practice of the NMIS for meat and meat products.

At the local level, NAFC involvement led to the issuance of the Joint DA-DILG Memorandum Circular No. 1, Series of 2013, that extended full support to Agricultural and Fishery Councils as local partners in the implementation of local development policies, plans, and programs. With this, 1,702 consultations were conducted and 1,219 resolutions were passed to address local agricultural and fishery issues and concerns. The following are some examples:

1. Promotion of the use of vetiver grass as an alternative (immediate) measure for enhancing soil moisture conservation and preventing soil erosion in Region II
2. Regulation of ambulant vendors selling seeds, seedlings, and other planting materials and the conduct of rigorous testing and research on new hybrid varieties (such as coffee), which are being locally-introduced before distribution to farmers in the province of Benguet. Related to this policy is the prohibition of the entry of untagged seeds (such as rice and corn) in the whole of Region II
3. Prohibition of the entry, selling, and application of agricultural chemicals such as pesticides marked with foreign labels (Chinese, Japanese, and Korean language, among others) instead of English and Filipino labels to ensure safety and proper use of agricultural chemicals in the province of Guimaras
4. Enforcement of the Farm Labor Code in the Municipality of Gonzaga, Cagayan that rationalized and standardized farm labor and wages during planting and harvest seasons in the locality.

3

Recognition of Achievers, Development Partners



Palayabangan: The 10-5 Challenge winners proudly display their Certificates of Recognition

THE Department of Agriculture commends the contributions of stakeholders to the growth and development of the Agri-Fishery sector. To honor outstanding achievements, it has instituted five main awards: 1) GawadSaka, 2) Agri-Pinoy Rice Achievers' Awards, 3) Palayabangan, 4) National Corn Achievers' Awards, and 5) National Organic Agriculture LGU Awards. These give due recognition to the role and the laudable efforts of the stakeholders in the sector that helped DA realize its targeted goals and push its development thrust.

GawadSaka



DA Secretary Proceso J. Alcala hands the Outstanding Rice Farmer Award to Jomar D. Jarvinia of Cabatuan, Isabela, who led this year's roster of Gawad Saka national awardees during simple ceremonies at the Philippine International Convention Center on November 15, 2013. Mr. Jarvinia received the award with his wife Christine.

GawadSaka has been an annual undertaking of DA since 1970. It honors and recognizes dedicated individuals and institutions that excelled in their respective fields, increased their productivity and income, and made significant contributions toward enhancing the development of the Agri-Fishery sector in their respective communities and the country in general.

The awards seek to encourage more farmers and fisherfolk to adopt modern, yet sustainable, production technologies, modern farm inputs, machinery and facilities that will enable them to improve their living conditions.

There were a total of 23 winners in GawadSaka

2013 — 14 individuals and nine farmers' and fisher-folks' groups. For their achievement, they received trophies, cash awards (ranging from Php 50,000 to Php 150,000) and project grants (ranging from Php 150,000 to Php 900,000) totaling Php 6.2 million.

The roster of GawadSaka 2013 national awardees was led by Mr. Jomar D. Jarvinia of Cabatuan, Isabela who produced quality rice via an integrated farming system. In 2012, he harvested an average of 320 cavans of palay per hectare during the dry and wet seasons.

Jarvinia maintains a two-hectare farm, where a portion is allotted to organic black rice and vegetables. He also raises organic livestock and chicken.

Agri-Pinoy Rice Achievers' Awards



The governors and agriculture officers of the top 10 provinces chosen as the Agri-Pinoy Rice Achievers for 2012 received their awards on March 15, 2013 at the Philippine International Convention Center

The 2013 Agri-Pinoy Rice Achievers' Awards, now on its third year, honors the country's top rice-producing municipalities, cities and provinces, Irrigators Associations (IAs), Small Water Irrigation System Associations (SWISAs), and agricultural extension workers (AEWs). The annual contest is part of DA's intervention and incentive system to encourage them to actively engage in the efforts to increase rice production so that the country can attain rice sufficiency while at the same raising the income of farmers.

For surpassing their palay production targets, attaining higher average yield, encouraging more

farmers to use quality seeds and appropriate technologies, and prioritizing rice-related projects, the provinces of Nueva Ecija, North Cotabato, Nueva Vizcaya, Isabela, Pangasinan, Ilocos Norte, Bukidnon, Bulacan, Kalinga, Mindoro Occidental, Laguna, and Lanao Del Norte were declared the country's top rice achievers for 2013.

Apart from the 12 provinces, 48 municipalities and cities, 10 IAs, 3 SWISAs, and 496 AEWs were also recognized. All in all, the winners received a total of over Php 110 million in prizes in the form of projects from the National Rice Program

National Quality Corn Achievers' Award



The awardees of the 2013 National Quality Corn Achievers pose with DA Secretary Proceso Alcala during the 9th Philippine National Corn Congress at Taal Vista Hotel in Tagaytay City on October 23

During the 9th Philippine National Corn Congress held on October 22-25, 2013, the National Corn Program and the Bureau of Agriculture and Fisheries Standards (BAFS) launched the first **National Quality Corn Achievers' Awards** to recognize top-performing LGUs and personnel who make outstanding contributions to the corn industry.

A total of over Php 28.9 million in prizes were awarded to the top five provinces and provincial corn coordinators, the top 24 municipalities and municipal corn coordinators, and the top 71 agri-

cultural extension workers.

The top provinces in 2013 were Pangasinan, Isabela, Occidental Mindoro, Misamis Oriental, and Agusan Del Sur.

During the ceremony, corn industry stakeholders were urged by the DA Secretary to sustain their efforts in making the Philippine corn industry globally competitive by producing more quality corn grains through the adoption of modern seeds, inputs, and technologies, coupled with mechanization and establishment of more postharvest facilities.

National Organic Agriculture LGU Awards



The awarding ceremony for the National Organic Agriculture LGU Awards was held during the 10th National Organic Agriculture Congress at the Philippine International Convention Center on October 17-18.

The National Organic Agriculture LGU Awards was established to support the promotion and development of the National Organic Agriculture Program (NOAP) and to recognize the role of the LGUs as its lead implementers.

During the 10th National Organic Agriculture Congress, the top-performing province, outstanding provincial focal person, top-performing municipalities, outstanding municipal focal person, and outstanding organic agricultural extension workers for each island cluster were duly recognized.

In Luzon, the top-performing province im-

plementing the Organic Agriculture Program was Nueva Ecija, while the top-performing municipalities were Tublay, Benguet; Sabtang, Batanes; Llanera, Nueva Ecija; and Goa, Camarines Norte.

In the Visayas, Negros Occidental was the top-performing province, with Dao in Capiz recognized as the outstanding municipality.

For Mindanao, the province of Agusan Del Sur was the top-performer, while Braulio E. Dujali in Davao Del Norte and Butuan City in Agusan Del Norte were adjudged the top-performing municipalities.

Palayabangan

The semi-annual nationwide rice production competition dubbed **Palayabangan: The 10-5 Challenge** was launched by the National Rice Program and PhilRice for their research stations as well as the private sector.

The challenge aims to develop technologies that would produce an average yield of 10 MT per hectare at a production cost of Php 5 per kilogram, a significant reduction from the current average input cost of Php 11 per kilogram.

The national winner will receive Php 5 million, Php 0.5 million in cash and Php 4.5 million to promote the winning technology. Regional winners will get a cash prize of Php 100,000. Those who will meet the 10-5 challenge will get a cash prize of Php 50,000,

while consolation prizes of Php 10,000 will be given to those who gain a profit of Php 80,000 per hectare.

The top yielder among the wet season 2013 entries surpassed the average yield in Isabela and almost met the competition standard despite the onslaught of typhoons in the latter part of 2013. Mr. Job Sevilleja of Lista, Ifugao attained a harvest of 7.49 MT per hectare by practicing the right timing of fertilizer application as well as good resource and crop management with input cost of Php 5.15 per kilogram. He was awarded Php 10,000 for gaining a profit of Php 88,866 per hectare.

Determined to further improve his palay yield, Mr. Sevilleja used his prize money to register for the dry season 2014 competition at PhilRice-Isabela.

Harnessing the spirit of competition



Sacks of palay are weighed to ascertain whether the challenge to produce 10 MT per hectare has been met.

THE idea that it is impossible for the country's farmers to compete with their counterparts in Asia is gradually being challenged. A case in point is the situation of farmers in the rustic barangays of Bohol province who have been producing rice for years but lament that they had never achieved the excellent harvest of 10 MT per hectare.

The National Irrigation Administration and DA RFO VII set out to change this scenario. They decided to spur production, but not by doling out farm inputs. Instead they began a project promoting healthy competition among the farmers, trusting that this would encourage each of them to shine because of the innate need to establish self worth.

They organized the Irrigation Service Fee Incentive Program (ISFIP) that sought to draw out the best in every farmer through a competition in

which every achiever would be compensated.

The ISFIP encouraged more than 300 farmers in four barangays to test their abilities and try to outshine one another.

The prize? Each farmer who could produce 5 to 9 MT per hectare would be given a 50 percent discount on the NIA service fee; those who could produce 7-9 MT per hectare would be totally freed from the service obligation.

For Mr. Terencio Palma of Pilar, Bohol, the service fee of about Php 4,000 is a big chunk of the farm expense that could be set aside for his family's needs, so he aimed to achieve the highest goal.

In the wet season cropping in 2013, he attained the unique distinction of reaching a 10 MT per hectare harvest that set him apart from the rest.

The farmers in barangays Bayongan and Capayas in San

Miguel, Barangay Malinao in Pilar, and barangays Balantawak, San Agustin, San Francisco, San Isidro, and San Jose in Talibon all use hybrid seeds and have access to irrigation.

What gave Mr. Palma a competitive advantage is the training he received as a seed grower.

The training program gave him the opportunity to meet rigid requirements in rice seed production, which he implemented on his farm. With this, he boosted his production from 6 to 10 MT per hectare, an achievement of a lifetime.

Having proven his self worth, he now wants his fellow farmers to stir their own motivations and achieve the same success that he experienced.

To date, Bohol remains supportive of the scheme and is the only one to offer such incentives to farmers.

4

Resiliency in Action



Some 865 chainsaw operators were mobilized from all over the country to aid in the clearing operations in Eastern Visayas areas affected by typhoon Yolanda

ON the average, about 20 tropical cyclones (i.e., typhoons, tropical storms, and tropical depressions) form in and/or cross the Philippine Area of Responsibility. From 2010 to 2013, the most destructive typhoons for Agri-Fishery were Juan (2010), Pedring, Quiel, and Sendong (2011), Pablo (2012), Santi and Yolanda (2013), with combined damages estimated to reach Php 87 billion. DA implemented rehabilitation programs to support the recovery of agri-fishery sectors affected by these natural calamities.

Restoring farming & fishing communities

Rehabilitation of areas hit by typhoon Pablo

Mindanao, the island known for many years to be typhoon-free experienced consecutive devastations in December 2011 due to typhoons *Sendong* (Washi) and *Pablo* (Bopha) a year later. These were also recorded as among the strongest tropical cyclones to hit the country in the past 12 years. Occurring in December 2012, the rehabilitation efforts in areas affected by typhoon Pablo took place in 2013.

The total cost of damage to agriculture caused by Pablo in Region XI reached Php 20.4 billion. The breakdown is shown in Table 29.

It damaged about 65 percent of rice areas, 67 percent of coconut farm areas, and 81 percent of banana areas, among others in Region XI (Table 30).

Government addressed the situation through the allocation of a Quick Response Fund (QRF), deployment of tractors and seeds from other regions to help in clearing and replanting, and the provision of production credit for banana farms. Rehabilitation of coffee, cacao and rubber farms are also ongoing.

Typhoon Pablo also proved costly to the banana industry in Region XI with damages reaching Php 22 billion. To assist the Cavendish banana growers in the rehabilitation of their plantations, the government, through the Land Bank of the Philippines (LBP), opened a credit facility which allows up to Php 430,000 in loan financing per hectare at 6 per cent interest rate per annum for 10 years. Table 31 shows the accomplishments of the rehabilitation package as of February 28, 2014.

In addition to credit assistance, the government implemented various rehabilitation activities for areas affected by typhoon Pablo. For Compostela Valley and Davao Del Norte, a total of 6,570 hectares have been cleared with the corresponding cash-work-payment scheme at Php 1,500 per hectare released fully as of March 31, 2014. In addition, 8,770 farm tools (two spades and two bolos per household) and 26,280 bags of basal fertilizer were provided to 1,831 farmers/households.

Table 29. Damages to agriculture caused by typhoon Pablo in Region XI

SUBSECTOR	AMOUNT (in billion Php)			
	Davao Oriental	Compostela Valley	Davao Del Norte	Region XI
Crops	5.38	11.22	2.78	19.35
Livestock/Poultry	0.18	0.13	0.00	0.31
Fisheries	0.52	0.25	0.02	0.79
TOTAL	6.07	11.60	2.78	20.44

Source: DA-Regional Field Office XI, as of March 2014.

Table 30. Damages to crops caused by typhoon Pablo in Region XI

CROP	Existing Area Planted before Pablo	Damaged Area (hectares)	
		Area	%
Rice	24,103	15,777	65.46
Corn	14,009	10,064	71.84
Cacao	2,825	2,347	83.08
Coffee	3,886	910	23.42
Coconut	106,580	71,149	66.76
Banana	56,272	45,468	80.80
Abaca	6,082	5,196	85.43
Vegetables	2,979	2,520	84.59

Source: DA-Regional Field Office XI, as of March 2014.



As part of its rehabilitation efforts, DA distributed chili seeds to farmers affected by typhoon Pablo. This helped the recovery effort as the farmers were able to harvest after only three months. The effort even gave rise to "Hot Pablo," a black pepper and chili-based food seasoning that has successfully penetrated the export market as well as other processed products like hot chili powder (inset photo)

Table 31. LBP loans for cavendish banana growers in Region XI

LOAN TYPE	Total Approved Loans (in million)	Total Loan Released (in million)	Total Loans (in million)	Total # of Contract Growers Served
PESO	554.42	532.58	1,786.62	379
Individuals	401.45	379.61	1,334.23	356 ^a
Small and Medium Enterprises	19.57	19.57	56.70	4
Corporations	10.00	10.00	106.00	1
Cooperatives	108.79	108.79	253	3 ^b
Rural Banks	14.61	14.61	36.69	15
DOLLAR	1.6	1.6	221.00	2

Note: ^a With 522 small farmers and beneficiaries. ^b With 416 small farmers and beneficiaries.

Source: DA-HVCDP, Rehabilitation of Cavendish Banana Plantations after Typhoon Pablo.

Reconstruction Assistance on Yolanda

On November 8, 2013, typhoon Yolanda, a Category 5 tropical cyclone with recorded wind speed of 315 kilometers per hour, wrought storm surges never before experienced and left the Visayas regions and parts of south Luzon flattened to the ground, causing thousands of casualties and huge damage to the Agri-Fishery sectors in these regions.

The estimated total worth of damage and losses amount to Php 571.1 billion (US\$ 12.9 billion). The destruction was so enormous that it wiped out almost the entire livelihood of the farming and fishing communities in these regions.

In Agri-Fishery, total damage and losses caused by Yolanda came to Php 28.9 billion, which accounts for 75 percent of the combined losses due to typhoons in 2013 of Php 38.4 billion. This amount includes production losses to crops, fisheries and livestock

of Php 24.6 billion and damage to infrastructure of Php 4.3 billion including irrigation systems and other facilities.

The extent of damage from Yolanda covered a total area of 685,813 hectares of agricultural lands with estimated crop losses pegged at 1.1 million MT, of which 80 percent was reported in Region VIII. Principal crops in the most badly affected areas of Regions VI, VII, VIII were palay (16 percent of crop area); corn (4 percent); and, coconut (73 percent).

The coconut sector suffered the most extensive damage, with 441,257 hectares affected of which 172,908 hectares is considered totally damaged. In addition, losses were reported for livestock, agricultural equipment, post-production facilities and fishing vessels and equipment, as well as damage to irrigation systems and rural infrastructure.

During the first four months after Yolanda (November 2013 to February 2014), DA's activities included relief operations, estimating the damage caused on commodities and facilities, laying down restoration plans, releasing quick response resources, and reaching out to the donor community that provided immediate support.

The boat MV DA-BEAR was among the first vessels to deliver relief goods to Tacloban bringing tons of dried fish, rice and clothes collected by DA-

related offices in Mindanao.

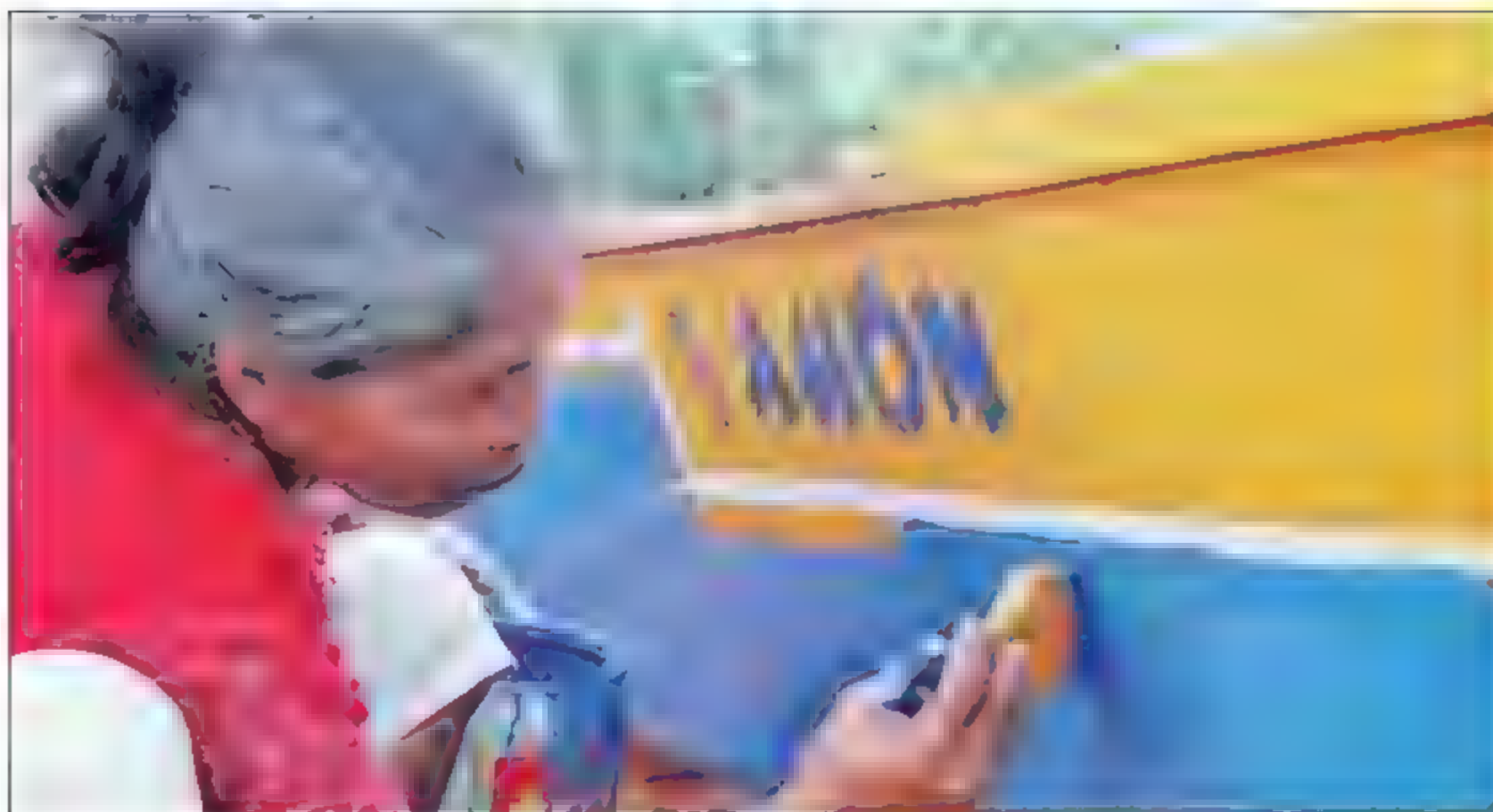
This was followed by the preparation and submission of the DA recovery and restoration plan that was eventually approved by the National Economic Development Authority (Table 32).

Promoting initial farm clearing operations and desilting of irrigation canals, rice farmers were able to receive the first wave of donation from the Food and Agriculture Organization in the form of seeds and fertilizer making possible the immediate replanting

Table 32. Approved interventions and accomplishments under DA-RAY, as of 30 April 2014

INTERVENTION	BUDGET (Php)	TARGET*	ACCOMPLISHED*	
Crops, Livestock and Poultry	1,845,570,265.00			
Clearing Operations, ha	288,308,417.00	119,021	694	0.58
De-silting Operations, m	2,192,213.00	45,843	664,299	1 449 07
Provision of Palay Seeds, bags	67,123,200.00	55,936	85,611	153.05
Provision of Corn Seeds, bags	55,031,000.00	36,660	3 564	9 72
Provision of Fertilizers, bags	257,726,400.00	214,772	80,283	37.38
Fue Subsidy, ha	206,326,978.00	155,435	11 259	7 24
Provision of Tractors, units	154,000,000.00	70	-	-
Provision of Farm Tools, sets	14,862,054.00	22,460	6 323	28 15
Rehabilitation of Facilities, units	600,000,003.00		-	
Coconut Rehabilitation	2,868,688,528.00			
Debris Management, ha	186,505,968.00	5,000	2,000	40.00
Coconut Replanting, ha	734,116,560.00	46,581	8 735	18 75
Coconut Intercropping, ha	265,896,000.00	33,237	16,083	48.39
Coconut Fertilization, ha	1 682,170,000.00	68,660	-	
Fisheries Rehabilitation	1,629,462,773.00			
Fishing boats, units	355,648,213.00	31,718	19,993	63.03
Engine distribution, units	119,081,270.00	21 581	4 789	22 19
Distribution of fishing paraphernalia	203,156,797.00	120,265	2 021	1.68
Fingerling Distribution, pieces	45,355 997.00	16,189 652	2 460 000	15 19
Fish cages/Fish farms	96,572,500.00	1,828	-	
Seaweed Farm implements Dryer	184,974,000.00	9,466	897	9 48
Seaweed Dryer, units	4,745,000.00	154	-	
Shed Fish Bamboo Rafts	8,100,000.00	540	21	3 89
BFAR Facilities	468,000,000.00	10	-	
Mariculture Parks Rehabilitation	138,828,996.00	551	-	
Coastal and Inland Fisheries Resources Rehabilitation and Development	5,000,000.00	2,000	-	
TOTAL	6,343,721,566.00			

* DBM-funded targets; ** Includes accomplishment from internal and external sources.



The Bureau of Fisheries and Aquatic Resources together with the private sector launched AHON! (Ascend!), an initiative to provide 10,000 fishing boats for 20,000 fishing families that lost their main means of obtaining food and livelihood

of rice farms that became ready for harvest in April and May 2014.

Through the Bureau of Fisheries and Aquatic Resources, a public-private initiative named AHON! (Ascend!) was launched to provide 10,000 fishing boats for 20,000 fishing families that lost their main means of obtaining food and livelihood.

With AHON, the support of the private sector topped up government resources making early response possible. Tractors and chain saws followed for the clearing and cutting of fallen coconut trees.

The first wave of initiatives was followed by a 90-day (March to May 2014) accelerated action plan called UMA-AHON (Farms Rising) focusing rehabilitation efforts on four highly populated municipalities accessible to transport. The targets were

set and included the clearing of 390,000 trees and establishing corn, vegetable and goat farms to ensure local food supply.

These initiatives were done in collaboration with other agencies and by mobilizing local people in cash-for-work activities. As of this writing, over 270,000 trees have been cleared with the mobilization of some 865 chainsaw operators from other parts of the country who had been rendered idle with the imposition of logging ban in their areas.

With relief operations expected to dwindle by mid-2014, the next phase of the Yolanda rehabilitation efforts will focus on restoring food sources for domestic consumption and the local market. DA units are poised to pursue the necessary projects as proposed in the plan.

Adaptation and mitigation initiatives

The country's agriculture and fishery sector is evidently threatened by the impacts of climate change: temperature fluctuations along with changes in rainfall patterns and the occurrence of extreme events such as super typhoons, floods, and drought, among others. In terms of production and livelihood, the impacts are reduction in crop yield, incidence/outbreaks of pests and diseases among plants and animals, migration of fish, insufficient food supply, and inadequate job opportunities.

In this scenario, the lack of effective and efficient interventions causes the identified impacts to exert tremendous pressure on agricultural production and livelihood. Thus, a thorough assessment of the sector and the impacts of climate change is very crucial, along with the development of mitigation and adaptation measures.

DA has developed two instruments as a part of

the development of climate-smart agriculture: these are 1) the Adaptation and Mitigation Initiative in Agriculture (AMIA), which is a policy instrument and communication strategy and 2) the Expanded Vulnerability and Suitability Assessment (E-VSA) that is used in the project identification stage as a decision support tool.

The VSA provides a ranking of municipalities based on soil suitability factors and vulnerability to extreme climate events of specific commodities or crops. To further sharpen VSA as a planning tool, additional parameters were included, taking into consideration socio-economic indicators such as poverty incidence, population, and area planted to come up with the E-VSA. The E-VSA may also be used as good governance tool as results can be viewed as online maps overlaid with interventions to show the physical progress of project implementation.

From rebels to farmers

FOR an extension worker, reaching the furthest barangays in order to mingle with the grassroots and serve the poorest municipalities is the norm. This, however, is made more challenging in conflict-ridden areas like Mindanao.

Although understanding the risks, this did not hinder Ms. Dearth Penanueva, an agricultural extension worker, to try and deal with the Moro Islamic Liberation Front (MILF) in order to help them change their lives.

Ms. Penanueva approached the group driven by the goal of "From Arms to Farms" – a program conceptualized by the Agricultural Training Institute (ATI) to encourage underground groups in the entire country to work with the government.

The program was launched in Region X with the aim of providing livelihood such as diversified and integrated farming to rebel returnees who are members of Ramatna Initiatives for Peace and Development Multipurpose Cooperative (RIPDEV MPC). Activities were provided to encourage them to manage their own farms instead of handling firearms.

Ms. Penanueva, as a former EHRDP (Expanded Human Resource and Development Program) scholar of the DA and ATI, believes that the knowledge she gained has inspired her to serve. She has also come to fundamental insight: "We must not think of farmers as outsiders; instead, we should be grateful for our farmers for it is because of them that we are working." According to her, ATI is not just providing extension work but is also helping promote peace.

Through her and the ATI - Regional Training Center (RTC) 10, a former rebel, Commander Batman, was able to make a piece of idle land productive. He was the first of five MILF leaders who yielded to the government and is currently the chair of the RIPDEV MPC. The four other rebel leaders soon followed suit upon witnessing



Director Astenio Salot (back to camera) of the Agricultural Training Institute welcomes former MILF commanders to a dialogue in Causwagan, Lanao Del Norte in February 2014.

the sincere efforts of the ATI to provide livelihood assistance to marginalized individuals.

As a first step, returnees were exposed to educational trips and field visits to some established farms in Bukidnon. After seeing the success attained by other farmers, they identified the commodities they wanted to produce that were suitable to their own land area. Former rebels were then trained and participated in a series of seminars related to such commodities as corn, strawberry, bulb onion, and garlic.

ATI maintained its support and assistance until the farms become sustainable and productive. The official initial assistance and commitment was given by the DA Secretary on August 23, 2013 when farm machineries such as hand tractors, corn shellers, and threshers were distributed.

About 1,000 farmers, fishers, and residents of Causwagan, Lanao Del Norte, participated, including four former leaders of the MILF with 61 of their members. Aside from farm machineries, cows and carabaos were provided by ATI as well as coffee and coconut seedlings from the Philippine Coconut Authority. ATI also

gave an after-training support fund of Php 300,000 to each of the four rebel groups so they could fully start up their farming activities.

These interventions have helped to enhance the peace and order situation in the previously troubled area. The undertaking has also helped the Armed Forces of the Philippines stationed in Lanao Del Norte in preserving peace and unity in the province.

To date, the former MILF commanders have already submitted the necessary papers to the concerned LGUs for their acquisition of carabaos and cows. The irrigation problem in their barangays has also been attended to.

Moreover, Commander Ismael with four other rebel leaders are currently undergoing Training of Trainers (TOT) on the PalayCheck system. They will then become facilitators when they graduate and conduct TOT and Farmers Field Schools (FFS) in their respective areas for 16 weeks. As the former MILF members gain knowledge and skills from their trainings, their farms will simultaneously be developed as these will be used as demo sites for FFS.

5

2014-16 Results Matrix and Desired Scenarios



DA will continue to promote farm mechanization to bring the rate for all crops to 2.3 horsepower per hectare from the current 1.23 horsepower

THE thrusts and priorities presented below embody the key principles stipulated in the Philippine Development Plan (PDP) 2011-2016, specifically “Chapter 4: Competitive and Sustainable Agriculture and Fisheries Sector,” as well as participatory governance through consultations with relevant Civil Society Organizations and Local Government Units as envisioned in Executive Order 43, s. 2011.

The vision in the medium-term is a modernized small holder agriculture and fisheries sector and a diversified rural economy that is dynamic, technologically advanced and internationally competitive, with the transformation guided by sound practices of resource sustainability, the principles of social justice, and strong private sector participation.

For the next three years, the strategies for the agriculture and fisheries sector will focus on 1) increasing productivity in the sector, 2) increasing forward linkages with the Industry and Services sectors, and 3) increasing the resilience of the Agri-Fishery sector to risks, including climate change.

With this, the PDP envisions that the sector would have achieved higher incomes and improvement of food security, especially for farm households by the end of 2016.

Based on the revised targets of DA in the PDP, we seek to be rice self sufficient in 2015, to maintain stable food prices at 3.5 to 4.5 percent inflation, to increase agriculture exports at 9.5 to 10.5 percent, and to increase labor productivity by 2.0 to 5.0 percent.

Anchored on the aforementioned three major strategies in the medium-term, DA interventions will focus on the following tasks:

Sustain the food staples sufficiency program and increase production of key food staples

The FSSP tops the list of priority programs for 2014 and 2015. In 2015, we target to be 100 percent self-sufficient. We strive to sustain our call for "*sapat at abot kayang pagkain para sa lahat!*"

Public investment in large-scale irrigation projects is intended to increase by 2016, so that there will be a total of 1.89 million hectares of irrigated agricultural lands. Further, construction of farm-to-market roads, establishment of fish ports/landings, major trading posts, hatcheries, laboratories and research centers, and deployment of critical farm machineries, such as post-harvest facilities and equipment, are also part of strengthening the Agri-Fishery infrastructure.

Calibrating the rice imports based on international commitments and losses from extreme calamities is a primary consideration, as well.

Enhance competitiveness of major commodities

The first undertaking is to diversify farm and off-farm income sources through multi-cropping and value-adding. DA is committed to invest in nature-based and built-up infrastructure for the fishing industry by continuing the mangrove rehabilitation and seaweed development program, distributing environmentally-friendly fishing gear, and installing more payaos in strategic areas. Also, DA intends to invest in post harvest and value adding facilities for the coconut industry by increasing the number of KANIB enterprise sites and coco agro-industrial hubs.

DA also targets also to raise the volume of production of major commodities (yellow corn, sugarcane, hog, chicken, and fisheries) and to champion and increase the area planted to high-value commodities such as coffee, cacao, and rubber. DA will encourage, as well, the intercropping of other commodities with coconut.

The income of a farmer who relies solely on

planting coconut (copra-based) is estimated at Php 20,000 per hectare per year. But if the farmer engages in integrated farming, he/she can gross as much as Php 89,000 per hectare every year for coconut-cacao, Php 172,400 for coconut-coffee, Php 102,325 for banana and Php 120,000 for sweet corn.

Improved market access, both local and international, requires appropriate facilities and strengthening of DA's regulatory capacity and procedures to comply with the requirements of its 18 trading partners in priority commodities. These regulatory efforts include responding to Sanitary/Phytosanitary and Technical Barriers to Trade and compliance with the requirements of the crops, livestock, and fisheries sectors.

In addition, DA will promote the use of the value chain approach to identify the needed support for more efficient linkages among producers, processors, marketing channels, and consumers, which will increase the income of farmers. DA maintains close coordination with its agri-attaches to facilitate export promotion.

Roadmaps for priority commodities, particularly those with big contributions to the gross value added in agriculture, are targeted to be finished in 2014.

Strengthen capacities and resiliency to respond to climate change challenges

In the medium term DA will focus on the recovery and rehabilitation of livelihood in areas affected by typhoon Yolanda, particularly in the hardest-hit region of Eastern Visayas. Other than that, DA also commits establishing climate-resilient agri-fishery infrastructure with improved designs. DA will continue to construct irrigation canals with concrete linings and farm-to-market roads with a permanent surface and proper drainage.

Technologies for the Agri-Fishery will also be upgraded to be climate resilient. DA aims to distribute tolerant varieties of crops, poultry and livestock, such as the Green Super Rice which was introduced in 2013. Green Super Rice lines are adaptable in areas with multiple stresses. For instance, these lines can work in drought-prone fields but the same lines also perform well in saline or flooded or even in poor soils.

In the case of poultry and livestock, we will promote the Parawakan native chicken, which originated in Southern Palawan. It can adapt to harsh conditions, requires less input, and is good for backyard chicken production.

Finally, we are pushing for the full mainstreaming of climate change adaptation measures and the fast-tracking of systems-wide programs on climate change.

In order to fully realize the targets and strategies laid out for the remaining years, close coordination with regional field offices and the technical service units is essential, including the collaboration from other DA agencies.

6

Preparations for AEC 2015



DA held a series of area-wide orientations on AEC 2015. Photo shows the one held for the Luzon B Cluster in September 2013 in Alfonso, Cavite.

BY the end of 2015, the ASEAN Economic Community (AEC 2015) will be in place, giving way to the elimination of tariffs for all products to encourage the free flow of goods in the member countries. Likewise, the harmonization of agriculture and food standards in the ASEAN will have also been finalized.

In 2013, DA engaged several stakeholders in agriculture in different consultations and workshops to conduct information dissemination as well as hear out their concerns. In all the meetings, the most common sentiment expressed was apprehension that the economic integration will adversely affect Agri-Fishery because of the influx of cheap goods from ASEAN countries.

This concern, brought about by a lack of information on AEC 2015, was easily addressed.

First, since 2010, almost all products had their tariffs eliminated. Only the products in the sensitive list (rice, corn, sugar, poultry and pork meat products, and cassava) retained their tariffs.

Second, data from 2009-2012 on ASEAN trade showed that there was no surge in the volume and value of imports. This means that the fear of the sector has not (yet) materialized.

Even so, DA has not been lax in its preparation for the AEC 2015 and has undertaken the following measures

- Continuing negotiations for the harmonization

of ASEAN food and agricultural products standards

- Assistance to small farmers to get required certifications by buyers (e.g., shallot farmers exporting to Indonesia);
- Provision of information and training for farmers and other stakeholders,
- Strengthening of inspection and audit systems;
- Increase and improvement of its laboratories; and
- Creation of the Agricultural Trade Competitiveness Committee which coordinates with the Committee on International Trade on AEC 2015 matters.

With the deadline of AEC 2015 nearing, there still remain challenges that the Department has to address, which include the following:

- Weak regulatory mechanisms especially on the pre-border inspection measures;
- Increasing and upgrading of testing laboratories;
- Development of standards that are consonant with global standards; and
- Training of regulatory personnel on the technical and policy issues with regard to plant, animal and fish quarantine.

DA continues to commit itself to the development of an enabling environment for Agri-Fishery so that the sector will be able to compete globally.

The DA Budget in 2013

AMOUNT (in Php '000)	FY 2011	FY 2012	FY 2013
Total New Appropriations	35,198,376	53,255,820	65,069,485
Distribution Per Program			
Irrigation Projects - NIA	12,790,650	24,454,052	26,829,295
Farm-to-Market Roads	2,500,000	5,000,940	7,054,680
National Rice Program	4,317,216	6,181,166	7,454,081
National Corn Program	483,642	950,739	1,524,301
National High-Value Crops Program	926,867	1,336,658	1,356,658
National Livestock Program	682,330	1,027,861	1,027,861
National Fisheries Program	1,792,912	2,400,505	3,655,650
Organic Agriculture	900,000	927,200	927,200
Quick-Response Fund	-	500,000	1,000,000
Credit Facility to Agrarian Reform Beneficiaries	-	-	1,000,000
Market-Oriented Program/ Trading Center	675,082	911,755	884,955
Other Support Programs	6,356,508	5,719,456	7,459,021
Locally-Funded Projects	2,911,181	1,450,577	2,886,192
Foreign-Assisted Projects	861,988	2,394,911	2,009,591
Distribution Per Office			
OSEC & its Bureaus & Attached Agencies	26,312,704	38,867,091	44,335,460
Cordillera Administrative Region	924,717	1,228,670	1,183,868
Region I	577,427	864,574	1,144,619
Region II	646,111	1,184,320	1,598,847
Region III	942,892	1,438,685	1,507,415
Region IV-A	655,817	1,000,146	1,425,355
Region IV-B	439,395	946,394	1,092,529
Region V	535,683	1,136,487	1,551,240
Region VI	593,421	1,168,968	1,915,702
Region VII	485,682	658,166	1,052,273
Region VIII	472,506	847,961	1,380,236
Region IX	397,233	687,309	1,131,642
Region X	488,994	723,857	1,186,553
Region XI	552,897	937,969	1,342,613
Region XII	477,621	795,093	1,295,630
Region XIII	374,375	557,208	1,043,783
ARMM	320,901	212,922	881,720
Budget Performance			
Allotment Received	37,329,934	49,964,118	65,278,472
Year-End Obligation Incurred	25,619,285	45,130,278	59,406,008
Utilization Rate as of End of Each Year	68.63%	90.33%	91.00%

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2013 Annual Report

*Pagyamanin ang pamayanan,
payamanin ang mamamayan!*



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